SOUND GALAXY

BUSINESS AUDIO BOARD

Fully compatible with Microsoft Windows Sound System

USER SOFTWARE MANUAL

SOUND GALAXY

Software Manual

Version 1.0

s/no: **40-SGSW-1000**

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Chapter 3 - The Voyetra Jukebox for Windows

Chapter 4 - Monologue for Windows

Before You Begin

Welcome to the various bundled software included with your Sound Galaxy card package. With these software, you will be able to add the element of sound to virtually every of your computing assignments; and what's more, have fun while you are at it.

Before you proceed with the various bundled software listed in this software manual, you should make sure that your Sound Galaxy card package has been set up. This includes the basic tasks of:

- Inserting the sound card into an empty expansion slot on your computer.

- Connecting any external audio device (speakers, microphone, etc.) to the sound card.

- Installing the bundled software and utilities onto your computer's hard disk.

- Verifying the sound card's installation.

If you have not completed these tasks, you must do so before continuing. The Sound Galaxy card's user manual will have more information on doing this.

What is found in this manual

This manual contains information about the various bundled software applications that came with your Sound Galaxy card package. The bundled software applications include:

♫   **Chapter 1 - Annotator**

This software is specially designed to help business users communicate more effectively within an organization. It allows you to embed recorded voice annotations into your documents or E-mail messages making them more personalized.

♫   **Chapter 2 - Windows Digital Audio Transport (WinDAT™) OLE**

With this software, you can record, play and edit your audio files. This version of the software also includes the Window's Object Linking and Embedding (OLE) feature.

♫   **Chapter 3 - Jukebox for Windows**

This software allows you to assemble sound events into a playlist, then play them in the order you have arranged. It is able to support "WAV" files, MIDI files and CD tracks.

♫   **Chapter 4 - Monologue for Windows**

This powerful text-to-speech synthesizer software lets you to add the element of speech to virtually any Windows applications. Once activated, you can get it "read out loud" text or numbers from your Windows word processor, spreadsheet, desktop publication or E-mail applications.

What you should know

While every care has been taken to ensure that the instructions in this manual are explicitly written, it would be impossible to provide detailed information for every given instruction.

As such, this manual assumes you have some basic knowledge of DOS and its commands, including commands for changing working directory, accessing your floppy disk drives, hard disks, etc. In addition, this manual assumes that you are familiar with all the basic procedures and methods of Microsoft Windows, such as starting Windows, using the mouse, clicking on icons and controls, choosing menu items, etc.

Manual conventions used

The following conventions are used throughout this manual to help you better differentiate and interpret its information:

Convention	Used For
Bold	Keywords, program names, windows, menus, options.
|KEY|	Keys found on the keyboard.
INSTRUCTION	Commands to be typed into your PC.
ALL UPPER CASE	Directory names, filenames.
(♪)	Information that you need to take note of.

Chapter 1 - Annotator

Annotator™ is a simple yet effective tool that lets you include voice messages in any of your documents that support Windows' Object Linking and Embedding (OLE) feature.

With Annotator, you can, for example, enhance your documents by adding recorded voice annotations at critical locations to stress certain points of the documents.

Many of the current Windows software applications such as Microsoft Word for Windows, Microsoft Excel, Microsoft Windows Write etc. have included the OLE feature into their application. Hence, you will be able to use Annotator with many of the popular Windows application available.

(♪) *If you wish to have Annotator activated automatically each time Windows starts, you can put ("drag and drop") Annotator in the* **Startup** *Group window. For more information on the Startup Group, please refer to your Microsoft Windows User's Guide.*

The rest of this chapter will show Annotator working with **Microsoft Windows Write Version 3.1** as an example. This example should work just as well for any other OLE-compatible applications.

1.1   Using Annotator with an OLE Application

Below shows a "quick-start" example to using Annotator with an OLE-compatible application (Microsoft Windows Write Version 3.1):

Scenario:

You want to sent a memorandum to a colleague (via electronic mail) inquiring about some information. You also want to stress that you need this information by a certain date.

Your solution may be to type out this document in Microsoft Windows Write, and use Annotator to record a voice reminder that you need a reply by the specified date.

The first thing to do is activate Annotator (if you did not put Annotator in the Startup Group of Windows). To do so,

1.   Double-click the Annotator icon, from the Sound Galaxy Group window.

      A minimized Annotator icon (bottom left corner) indicates that it is activated.

2.   Open the Microsoft Windows Write application (under the **Accessories** Group window), and type in your document.

3.   Move the cursor to the location where you want to place the recorded voice message, and press [Ctrl]+[R] (this is the default "hot key" for Annotator). This will display the Annotator main window and start the recording operation.

(♪)   *You can use the Mixer Control utility that came bundled with your sound card to adjust the microphone recording volume prior to recording. (For more information on the Mixer Control utility, please refer to the sound card's user manual.)*

◄   Record the message from a microphone connected to your sound card.

When you are done recording, select the **Accept** button, , or press [Enter].

Your voice message is embedded in your document, as indicated by the Annotator icon appearing at the cursor location.

◄   Save this document by the usual method.

When your colleague opens up this document, the Annotator icon informs him or her that this document includes a recorded voice message. To hear the recorded message,

◄   All he/she has to do is to double-click at the Annotator icon in the document.

(♪)   *The voice-embedded document can be played back on any Windows system that has Microsoft Windows Write Version 3.1 and audio drivers installed.*

Click the left mouse button to stop the voice message.

1.2   Annotator's Main Window

The following diagram describes Annotator's main window.

Scroll Bar

While playing, shows the current file position relative to the length of the recording.
While recording, shows the length of the recording relative to the Maximum Time Display.

Transport Controls

Tape-deck style buttons that lets you Stop, Play, Record and Pause when in this window.

LED Indicator

Level Indicator to show the relative volume.

Maximum Time Display

Shows the maximum time that you can record. You can change this limit with the Maximum Time option under the Setup menu.

Status Display

Shows the current operation of Annotator.

Current Time Display

While playing, shows the current file position.
While recording, shows the length of the current recording.

Figure 1.1 Annotator's Main Window

There are two buttons, **Accept** and **Cancel** , in the Annotator main window:

Accept   Minimizes Annotator and embeds the recorded message into the current document.

Cancel   Minimizes Annotator without embedding the recorded message into the current document.

1.3 Annotator's Functions

Annotator's main window also has two pull-down menus (**Edit** and **Setup**) which contain additional functions. This section will describe these functions.

1.3.1 Edit Pull-down Menu

The **Edit** pull-down menu consist of two functions: **Copy** and **Paste**.

Copy is used to copy a **WAV** file currently in Annotator to the clipboard, while **Paste** is used to load a **WAV** file from the clipboard into Annotator.

1.3.2 Setup Pull-down Menu

The Setup pull-down menu consist of four functions: **Auto Record, Hot Key..., Maximum Length...**, and **Always on Top**.

Auto Record and **Always on Top** are toggle functions which you can enable or **disable** by simply pressing [**Enter**]. When the **Hot Key...** or Maximum Length... function is selected, they will each display a dialog box for you to set their configuration value.

When **Auto Record** is enabled (✓), Annotator will start recording as soon as it is activated. Otherwise, you can only start recording by pressing the record button on Annotator's main window.

When **Always on Top** is enabled (✓), Annotator will always be the topmost window, even if it is not activated. Otherwise, it will follow the normal rules of Windows.

Auto Record and Always on Top are, by default, enabled as indicated by the ✓ beside the function in the pull-down menu.

When the **Hot Key...** function is selected, the **Annotator Hot Key** dialog box is displayed. This dialog box allows you to select the keys used to invoke Annotator's main window.
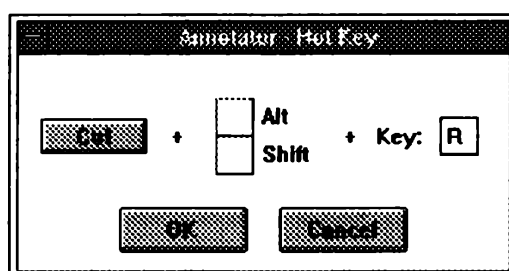
Figure 1.2 Annotator Hot Key Dialog Box

When selected, the **Maximum Length...** function displays a dialog box (see below) which allows you to specify the maximum length (in minutes and seconds) for your voice recordings.
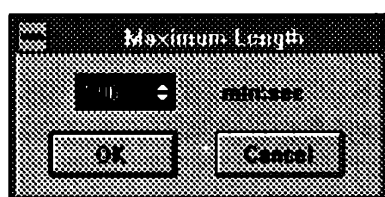
Figure 1.3 Maximum Length Dialog Box

1.4   Additional Notes about Annotator

I his section contains additional information about the Annotator application which you might want to take note of when using it.

1.4.1   Recording Annotations

Once Annotator is **activated** (minimized), you can invoke its main window to begin recording operation in any one of the following ways:

I   Press the defined "hot key" sequence (for example, the [Ctrl]+[R] keys).

♪   Double-click the minimized Annotator icon.

I   Select the **Record Note** option from an application's system menu (for example, Microsoft Windows Write).

Restore	
Move	
Size	
Minimize	
Maximize	
Close	Alt+F4
Switch To...	Ctrl+Esc
Run...	
Record Note	Ctrl+R
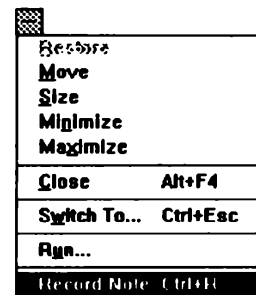
(♪)   *Annotator cannot identify which applications support OLE and which do not; so it will insert the Record Note option into every application's system menu. Therefore, the presence of the Record Note option in an application's system menu does not guarantee that the particular application is OLE-compatible.*

1.4.2 Playing Annotations

The embedded voice annotation in a document can be played back in an one of the following methods:

♦ Double-click the Annotator icon in the document.

♦ Under an application's **Edit** pull-down menu (for example, Microsoft Windows Write), select the **Play** command from the **Annotator Object** option.

Edit	
Undo Editing	Ctrl+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Paste Special...	
Paste Link	
Links...	
Annotator Object	
Insert Object...	
Move Picture	
Size Picture	
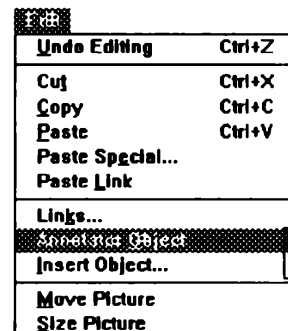
1.4.3 Editing Annotations

You can record over a voice annotation even after it has been embedded into a document. To do so:

1. Click once on the Annotator icon in the document.

2. Under an application's **Edit** pull-down menu (for example, Microsoft Windows Write), select the **Edit** command from the **Annotator Object** option.

   This will bring up the Annotator main window. From here, you can record over the embedded annotation.

Edit		
Undo Editing	Ctrl+Z	
Cut	Ctrl+X	
Copy	Ctrl+C	
Paste	Ctrl+V	
Paste Special...		
Paste Link		
Links...		
Annotator Object		Play
Insert Object...		Edit
Move Picture		
Size Picture		
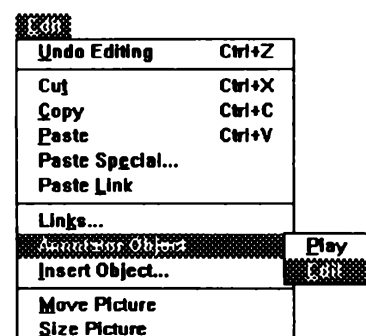
(♪)   *You can also edit the annotation embedded in your document by using the **Windows Digital Audio Transport (WinDAT™)** application . For more information on doing this, please refer to the following chapter.*

Chapter 2 - Windows Digital Audio Transport (WinDAT) OLE

The Windows Digital Audio Transport (WinDAT) OLE is a Windows-based application that lets you play, record and edit digital sound files with your sound Galaxy card.

WinDAT has easy-to-use, tape deck-styled control buttons, and graphically displays the digital sound file for more accurate editing.

With WinDAT, you can easily create new files by cutting and pasting from existing sound files. WinDAT also lets you work on two different files at once, performing cut and paste operations between them. With its Clipboard feature, WinDAT provides a convenient way to verify or audition contents before pasting.

WinDAT also comes with **Object Linking and Embedding (OLE)** feature that enables you to "drag and drop" audio files into OLE documents so that you can include speech and sound into those documents.

WinDAT's main window is divided into five areas, as shown in **Figure 2.1** below.

Menu Bar

Transport
Controls

Range
Controls

Graphic File
Display

Status Area
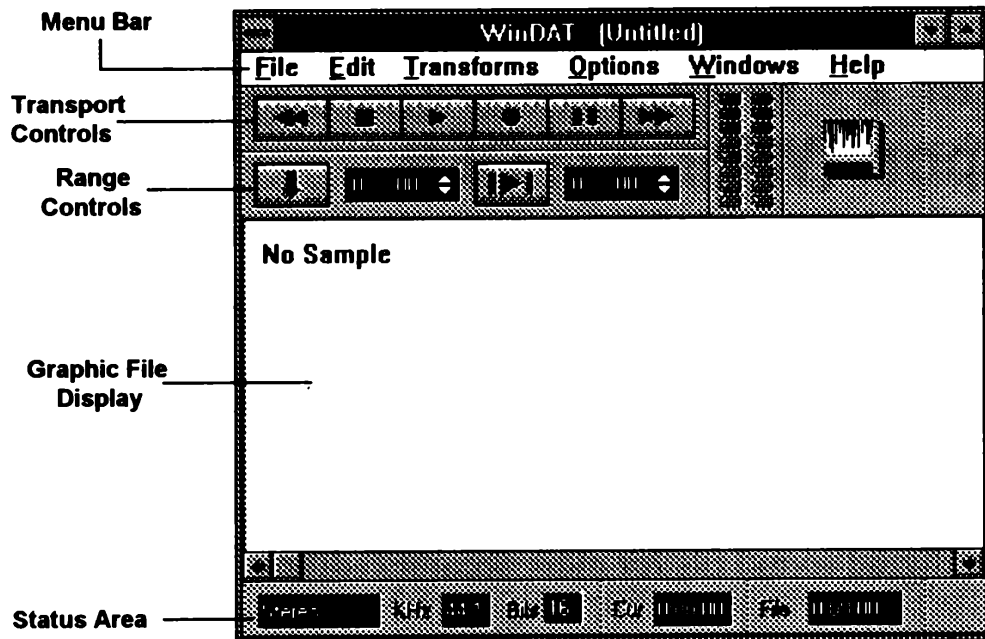
Figure 2.1 WinDAT's Main Window

- **Menu Bar** – Pull-down menus common to all Windows applications.

- **Transport Controls** – Rewind, Stop, Play, Pause, Record, and Fast Forward buttons, similar to a tape deck.

- **Range Controls** – Contains buttons for defining and/or playing a specif range of the digital sound file.

- **Graphic File Display** – A visual representation of the digital sound file. A windows-type scroll bar allows you to scroll through the file when if overshoots the display screen.

- **Status Area** – Contains information about the current file: its type, samp rate, bit length, the current cursor position and the file's total size.

2 1 WInDAT Tutorial

This tutorial is designed to familiarize you quickly with WinDAT's basic functions. If this is the first time you are running WinDAT, you should complete this tutorial to understand WinDAT better.

2 1 1 StartIng WInDAT, Loading and Playing a File

To start WinDAT,

Double click on the
WinDAT icon in the
Sound Galaxy Group
window.
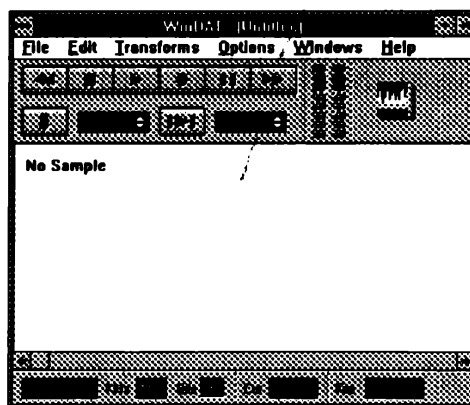
... to display
WinDAT's
main
window.

To load a sound file (using *DOGBRK.WAV*),
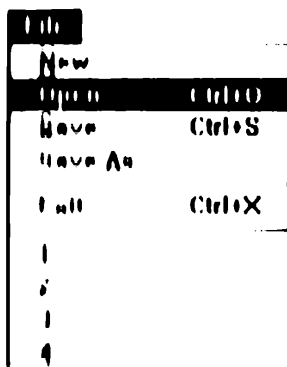
Select Open from the File pull-
down menu...
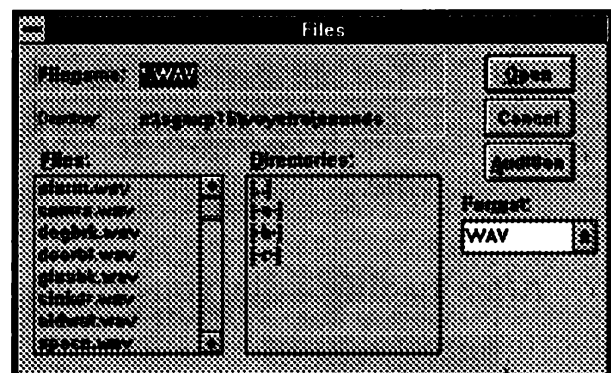
...to display the **Files** dialog box.

At the **Files** dialog box,

1.   Select **WAV** (file format) from the **Format:** list box, and change the directory to *C:\SGPRO16\VOYETRA\SOUNDS* to list all the **WA** files in the **Files:** list box.

(♪)   *This assumes you have installed the Sound Galaxy software on drive C under the SGPRO16 directory. If not, type in the appropriate drive at directory.*

You can hear what a file sounds like by clicking at the file, and then clicking at the **Audition** button.

2.   Select *DOGBRK.WAV* from the **Files:** list box. You can either double-click at the filename, or click at the filename and then choos **Open**.

WinDAT loads the selected file, *DOGBRK.WAV*, onto the main window. The filename is shown at the top of the window and a graphic display of the sound file appears in the middle of the scree At the bottom of the window shows the status of the current file.

(♪)   *You can also select the sound file from your Windows' File Manager, then drag and drop the file onto the WinDAT main window to load th file.*

After loading a file, you can play the file.

1.   Click the **Play** button, ▨ , in the **Transport Controls** area.

The digital sound file is played from beginning to end. You can als see a vertical indicator moving across the graphic display of the sound as it is playing.

You can stop or pause the sound midway by clicking at the **Stop,** ![Stop button], or **Pause,** ![Pause button], button respectively.

If you want to play the sound again, you have to rewind the sound back to the start. This step is redundant if WinDAT is in **Auto Rewind** mode. When Auto Rewind is activated, WinDAT automatically rewinds to the start of the file every time the file is stopped.

(♪)
You can use the Mixer Control utility that came bundled with your sound card to adjust the playback volume level. (For more information on the Mixer Control utility, please refer to the sound card's user manual.)

The default WinDAT setting is in **Auto Rewind** mode. Hence the rewind function is redundant unless you disable the Auto Rewind option (see below).

To rewind the file

1. Click the **Rewind** button, ![Rewind button], in the **Transport Controls** area until the level indicator on the graphic display of the sound file moves back to the start of the display.

To enable/disable Auto Rewind

1. Choose **Auto Rewind** from the **Options** pull-down menu to toggle between the modes.

   A tick, ✓, next to the option name indicates that it is enabled.

Options
Auto Audition
✓ Auto **Rewind**
No Wave
Playback VU
Record VU
Always on Top
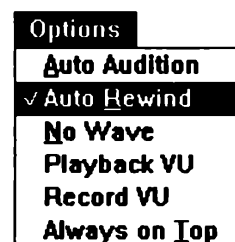
2.1.2   Recording a File

You can use WinDAT to record digitized sounds in either **WAV** or **VO(**
file format, at differing sample rates and according to a selected bit leng

(♪)   *You may have to select the recording source and/or set its level. To do*
this, you can use the Mixer Control utility that came bundled with yo
sound card. (For more informaiton on the Mixer Control utility, pleas
refer to your sound card's user manual.)

To setup WinDAT for recording
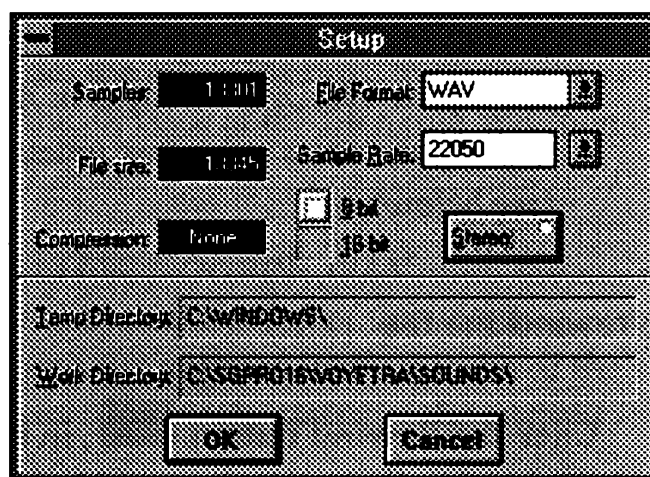
Choose **Setup**
from the
Windows
menu...

...to display the **Setup** dialog box.

At the **Setup** dialog box,

1.   Select the desired file format (**WAV** or **VOC**),

2.   Select the desired sample rate by choosing one of the sample rate
     listed in the **Sample Rate** list box,

\ Select the desired bit length and specify the recording mode (**Stereo** or **Mono**).

When choosing the **Setup** parameters, you should be aware of the following:

- Higher sample rates result in better audio quality; lower sample rates result in a significantly smaller file size.

- Higher bit length will yield better audio output but will consume more disk space.

- Some slower computers may not be able to function correctly when recording at the higher sample rates or bit length because they are not capable of writing to disk fast enough.

- Although WinDAT supports different bit lengths in both stereo and mono, it cannot convert files between stereo and mono, or between different bit lengths.

Once you have properly set WinDAT's recording parameters and connected the audio input source to the appropriate input jack on your sound card, you are ready to record.

To record with WinDAT:

\ If you are recording from a CD or Tape player, "cue up" the material as needed.

If necessary, use the Windows mixer utility included with your sound card to select the recording source and adjust the recording level.

3. Click the **Record** button, ▟ , in the **Transport Controls** area to g into record standby mode.

   Notice the **Record** button starts flashing to indicate that it is in Standby mode.

4. Click the **Play** button, ▶ , to start recording.

   Notice the **Record** button, ▟ , indicates that WinDAT is now recording.

5. Begin playing the audio equipment or speaking into the micropho₁

6. When you are done, click the **Stop** button, ■ .

   You can click the **Play** button to hear what you have just recorded.

When you are satisfied with what you have recorded, you can save the recording as a file.

To save a file

1. Choose **Save As...** from the **File** menu.

   The **Files** dialog box is displayed.

2. Enter the filename and click the **OK** button.

   ♪   *You can use the Save option for any subsequent saving of this file.*

2.1.3 Adding Sound to OLE Applications

With WinDAT's OLE capability, you can add sound to any OLE compatible programs such as Microsoft Word for Windows, Microsoft Excel, Microsoft Windows Write, etc. WinDAT uses the simple **drag and drop** method for getting your sound files into OLE documents.

As an example, we will add the file, *ALARM.WAV* (located in the *C:\SGPRO16\VOYETRA\SOUNDS* directory), into a **Microsoft Windows Write Version 3.1** document.

(♪)   *This assumes you have installed the Sound Galaxy software on drive C: under the SGPRO16 directory. If not, type in the appropriate drive and directory.*

1.   Open the Microsoft Windows Write application (under the **Accessories** Group window), and type in your document.

2.   Activate WinDAT, and load the file, *ALARM.WAV*. You can refer to the earlier section for more information on starting WinDAT and loading sound files.

3.   Resize both the WinDAT and Microsoft Windows Write screens in such a manner that you can see both windows on your screen.

4.   Move your mouse cursor to the WinDAT icon, ▓ , at the top right of the WinDAT main window, click and drag it to the desired location in your Microsoft Windows Write document.

5.   Release the mouse when you are at the desired location. A WinDAT icon appears in the document to indicate the sound file has been embedded.

You can play the file by double-clicking at the WinDAT icon.

If you like, you can also record your own sound file using WinDAT ar then embed it into your document by following the instructions above. Refer to the earlier section on recording a sound file for more information.

2.1.4   Controlling WinDAT with Your Keyboard

To make working with WinDAT more effective, you can also use the keyboard to activate the **Transport Controls**. As you get more familiar with WinDAT, you can use both the mouse and keyboard simultaneous to control the different function.

The following is a table of the keyboard equivalents for the **Transport Controls** buttons:

Transport Controls	Keyboard Equivalent
Play	(Spacebar)
Stop	(Enter)
Rewind	(< ,)
Fast Forward	(> .)
Pause	(P)
Record	(R)

Table 2.1 Keyboard Equivalents For Transport Controls Button

2.1.5   Editing a File

WinDAT includes editing features that allow you to:

• Delete a section of a file

• Copy a section of a file

• Paste a new section into a file

• Insert a section of silence into a file

To edit a file, you must first specify the section or range of the file that you wish to edit.

The range that you selected is indicated by the **Start Time** and **End Time** marker boxes in the **Range Controls** area (**Figure 2.2**) and appears highlighted in reverse on the graphic file display. This gives you precise starting or ending time values, and a graphic representation of the selected range.
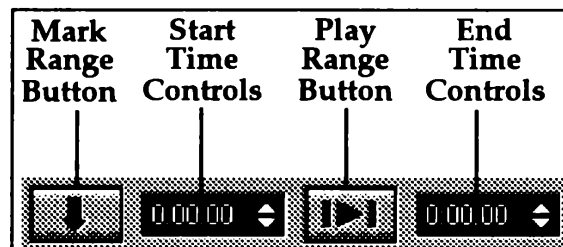
Figure 2.2   Range Controls

There are several methods that you can use to select a section or range of the sound. Here, you will go through each one, and then you can decide which one to use for future editing.

To select a range:

Method 1:

1.   Move the mouse cursor to the starting point in the graphic file display.

2.   Then, holding down the mouse button, **drag** to the desired ending point, and release the mouse button.

      This highlights the selected range and load the appropriate values into the **Start Time** and **End Time** marker boxes.

Method 2:

You can also mark the starting/ending points of a range as you listen to the playback of a file. To do so,

1.   Play the file and when you hear the beginning of the section you want to select, click and hold down the **Mark Range** button, �###.

2.   Release the **Mark Range** button when you reach the end of the section.

      The range is highlighted, and the **Start Time** and **End Time** marker boxes displays the values for the selected range.

Method 3:

1.   Click on the **Start Time** marker box, ▐ 00.00 ▲▼ , and drag up or down to reach the desired start or end time.

2.   Do the same for the **End Time** marker box.

      With this method, you can make minute changes to the **Start** and **End Time**.

After selecting a range, you can adjust the starting or ending point of a range for a more accurate editing.

To adjust the starting or ending point of a range:

Method 1:

I   Click on the **upper arrow** in the appropriate marker box, , to increase the starting or ending time by 1/100th of a second.

2   Click on the **lower arrow** of the appropriate marker box to decrease the starting or ending time by 1/100th of a second.

Method 2:

I   Move the mouse cursor to the new starting or ending point in the Graphic File Display.

2   Holding down the **[Shift]** key, click the mouse button.

This changes the starting or ending point.

To clear the selected range:

I   Click anywhere in the **Graphic File Display** to clear the range selection.

To select the entire file:

I   Double-click anywhere in the **Graphic File Display** to select the entire file.

To playback a selected range:

I   Click the **Play Range** button, , in the **Range Controls** area.

Now that you know how to select a range, you are ready to try out son of WinDAT's editing functions.

To remove a section of a file

1.   Open the file *DOGBRK.WAV*.

2.   Select the range of the file that you wish to remove.

3.   Choose **Cut** from the **Edit** menu.

You can play the file to hear the results of the edit.

Edit	
Undo	Alt+Bksp
Cut	Shift+Del
Copy	Ctrl+Ins
Paste	Shift+Ins
Mix Paste	
Select All	
Delete	
Erase	
Trim	
Insert Silence...	

The **Cut** command deletes the selected range from the file and places i WinDAT's **Clipboard**. The rest of the file is shifted up to fill in the ga

(♪)   *WinDAT's **Clipboard** is not to be confused with the Windows Clipboard. WinDAT does not use the Windows Clipboard.*

If you want to duplicate a portion of the sound instead, you can replac the **Cut** command in **step 2** above with **Copy** to place the sound segme into WinDAT's Clipboard.

Sometimes, you may want to move or duplicate a portion of the sound to another area. Then you can use the **Paste** command to place the sou segment from WinDAT's Clipboard to the desired location in either th current file or a different file.

To paste the contents of the Clipboard into another location

I. Choose **Clipboard** from the **Windows** menu to verify that the data has been placed in the Clipboard.

The Clipboard window is displayed (**Figure 2.3**).
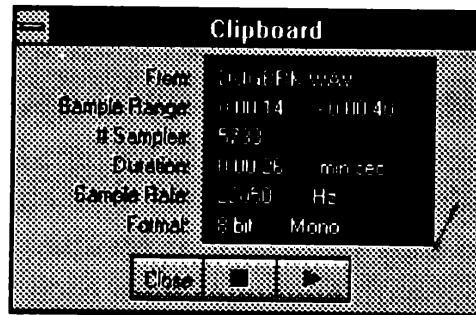
Figure 2.3 The Clipboard Window

2. Press the **Play** button, ▶ , to hear the contents of the Clipboard.

3. Click **OK** to go back to WinDAT's main window.

4. Select the point where you want to paste the Clipboard contents.

That point is indicated in the range's starting point.

5. Choose **Paste** from the **Edit** menu.

The contents of the Clipboard is inserted at the starting point; and any data after that point is shifted to the right.

(♪) *If you want to paste into a different file, simply load that file, and follow steps 4 and 5.*

You can also mix a sound segment from WinDAT's Clipboard into a sound file. To do this, you use the **Mix Paste** command instead of the **Paste** command. The steps to follow is exactly the same as the **Paste** command described above.

Using Erase, Delete and Insert Silence

Three other functions that you can use to alter a sound are the **Erase**, **Delete** and **Insert Silence** commands under the **Edit** menu.

These three commands work in basically the same manner as those described before, and they have similar results. **Table 2.2** below descr each function and the result to expect from each function. You can try these three functions out on your own.

Erase	Puts a copy of the selected range in WinDAT's Clipboard and replaces it with silence.
Delete	Deletes the selected range, but does not move the data to WinDAT's Clipboard. The data deleted cannot be recovered except with the Undo command immediately following the Delete command.
Insert Silence	Inserts a specified interval of silence (from .01 to 10 seconds) at the starting position of the selected range, shifting everything after the starting position to the right. The Insert Silence dialog box presents you with a slider to adjust the duration of the silence.

Table 2.2 Description of the Erase, Delete and Insert Silence commands

If you made a mistake while editing, you can undo the operation by u the **Undo** command immediately.

2.1.6   Modifying a File with the Transforms Functions

You can also use the options in the **Transforms** pull-down menu to modify your sounds. Like the editing functions, all of the **Transforms** functions operate on a selected range.

Normalize

With **Normalize**, you can scale the amplitudes in the **selected range** such that the peak value is converted to the maximum possible amplitude with the sound hardware.

(♪)   *Normalize is useful for optimizing the loudness of files recorded at a low level, without introducing additional distortion.*

To normalize a sound segment,

1   Select the sound segment to be normalized.

2   Select **Normalize** from the **Transforms** pull-down menu.

The amplitude of the sound segment is adjusted accordingly.

Find Peak

With **Find Peak**, you can:

- Displays a pop-up window reporting the amplitude and location the peak (loudest) value in the selected range.

- Sets the start point marker and the current (play) position to one second before the maximum amplitude value.

- Sets the end point marker to 1 second after the maximum amplitu value.

Find Peak is useful for finding the beginning of a word in a file containing recorded speech, or for locating an unwanted peak so that i can be scaled or deleted, etc.

To find the peak amplitude of a selected segment,

1. Select the sound segment.

2. Select **Find Peak** from the **Transform** pull-down menu.

   The **DAT** pop-up window displays the amplitude and location of the peak in the selected range.

3. Click the mouse cursor at the **OK** button.

   The current pointer is at the peak value, and the end point marke set to 1 sec after the current level.

Scale function

The Scale function is used to increase or decrease the loudness (amplitude) of the selected range by a specified factor between .01 and 10.00. For example, a scaling factor of 2.0 doubles the amplitude, and a factor of 0.5 halves the amplitude. This feature is useful for matching loudness between different files when cutting and pasting between them.

To scale the loudness (amplitude) of a selected range:

1   Select the range you wish to scale,

2   Choose **Scale...** from the **Transforms** menu. The **Scale** dialog box is displayed (**Figure 2.4**).
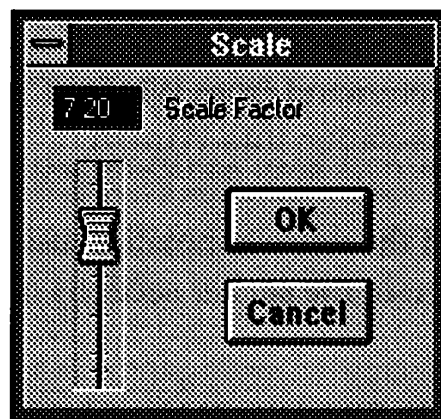
Figure 2.4 The Scale Dialog Box

1   Use the mouse to drag the slider up or down to the desired scaling factor (between .01 and **10**). Then choose **OK**.

The selected sound segment's loudness is scaled accordingly.

2.1.7   Using WinDat with Annotator

You can use WinDAT to edit a voice annotation (WAV file) that has be embedded in an OLE document by **Annotator**. To carry this out, follo the instructions below:

1.   With your OLE document opened, click once on the Annotator ic

2.   Under your OLE document's **Edit** pull-down menu, select the **Ed** command from the **Annotator Object** option.

     This will bring up the Annotator main window.

3.   Select the **Copy** command from Annotator's **Edit** pull-down men load your voice annotation into the Clipboard.

4.   Select the **Paste** command from WinDAT's **Edit** pull-down menu load the voice annotation into WinDAT.

5.   You can then edit the voice annotation using WinDAT's editing procedures shown in the earlier sections of this chapter.

(♪)   *Do not minimize Annotator at this stage or WinDAT will not be editing the embedded object.*

6.   When you are done, select the entire WAV file by double-clickin WinDAT's **Graphic File Display**.

7.   Copy the edited voice annotation to the Clipboard by using WinDAT's **Copy** command.

ℵ   Using Annotator's **Paste** command, embed the edited annotation back into the OLE document.

◆   Click on the **Accept** button in Annotator to update the document and minimize Annotator.

You can now either minize or close the WinDAT application.

2.1.8   Quitting WinDAT

When you are done working with WinDAT, you can quit WinDAT by:

| Choose **Exit** from the **File** pull-down menu.

Control is returned to the Windows environment.

You have just completed the WinDAT tutorial. You should now be familiar with most of the functions used to run WinDAT.

2.2   Troubleshooting WinDAT

Because of the somewhat complex nature of digital audio, sound hardware, and the Windows environment, it is possible that you may encounter proble using WinDAT with your system. If you encounter any problems, first try following these steps:

- Go through the instructions carefully, to make sure you did not miss anything.

- If WinDAT seems to be working correctly, but you just cannot hear any sound, check the connections between your sound hardware and your sound system (amplifiers, speakers, etc.).

- **Is it a hardware or software problem?**

    Run your sound card's diagnostics program (if any). This tells you if the problem is being caused by improper installation of the sound hardwa itself, or whether the problem is related to WinDAT. Alternativly, you can use the **Sound** icon in the Windows **Control Panel** to test the digit audio playback operation.

- Read through the rest of this troubleshooting section carefully. It identifies and solves some of the more common problems.

The complexity of recording and playing back digital audio on a PC tends to push even the most powerful systems to their limit. Consider that recording kHz 16-bit stereo requires moving almost 200K of audio data between your sound hardware and hard disk in one second!

There may be certain situations where your system just will not be able to ke up with what you are asking it to do. For example, if you try to record 16-bi audio at 44.1 kHz on a 12 MHz 286, you are almost certainly going to encoul problems.

you find that your system is giving you unsatisfactory digital audio performance, here are some simple things you can do to improve it:

Fragment your hard disk

Digital audio performance will suffer if your hard disk becomes fragmented, that is, one or more of the files on your hard disk are stored in small fragments in numerous, scattered locations. Usually, severe disk fragmentation causes WinDAT to generate a "**Disk Could Not Keep Up With Digital Audio Rate**" error message.

Fragmentation can become an especially serious problem on large disk volumes created with DOS 5.0. For best results, you should use one of the many commercial disk optimizing utilities that are available. Optimize regularly and often.

Run Windows in Standard mode

Compared to Windows' Standard mode, 386 Enhanced mode uses quite a bit more system resources and slows down hardware access in general. Try running Windows in Standard mode.

Use a data format that is less demanding

If you are recording and you encounter an error message such as "**Disk Could Not Keep Up With Digital Audio Rate**", try decreasing the sample rate or bit resolution. If you are recording in stereo, try switching to mono.

Close any unnecessary applications

Other Windows applications that are open could be making demands on system resources. Try closing any Windows applications that you do not need.

2.2.1 Digital Audio Format Problems

Various other software packages on the market have the ability to save **VOC** files in compressed form using proprietary Sound Blaster compression schemes. WinDAT can play these files; however they can be edited in any way. If you load such a file into WinDAT, the wave fo will not be displayed in the **Graphic File Display**; instead, the word **"Compressed"** is displayed.

Other products, such as Creative Labs' Voice Editor and Voice Editor II save **VOC** files in a "multi-chunk" format. If you attempt to load such a file into WinDAT, a dialog box appears, giving you the option of either loading and converting the file to the "non multi-chunk" **VOC** data format, or loading it without converting it. If you choose to load but no convert the file, its data will not be displayed in the **Graphic File Displ** area and WinDAT cannot perform any **Edit** or **Transforms** operations. you do convert the file, it may then be too large to load back into Voice Editor.

Symptoms:

"Unsupported Audio File Format", "Invalid Bit Length", or "Invalid Sample Rate" error messages.

Solutions:

WinDAT is designed to work with any Windows-compatible digital audio hardware, and therefore lets you open and edit any standard W or **VOC** file. However, if you try to record or playback an audio file whose format (sample rate, bit length, stereo/mono) is not supported b the sound card, WinDAT displays one of these error messages.

2.2.2 Driver-Related Problems

Symptoms:

- "Could not load audio driver" error message

- WinDAT causes a Windows "**General Protection Fault**".

Solutions:

These symptoms usually indicate that the Sound Galaxy driver is either missing or incorrectly configured. Use the **Control Panel's Sound** icon to check digital audio playback.

If you cannot play digital audio from the **Sound** icon then either, the problem is most likely with the installation of your Sound Galaxy Windows audio driver. Run the **Drivers** icon and verify that the Sound Galaxy Windows audio driver is configured to use the correct IRQ, I/O address, DMA channel, etc. Re-start Windows and try the Sounds icon again.

If this does not solve the problem, try re-installing the Sound Galaxy Windows driver.

2.2.3 Data Rate Problems

Symptoms:

- "Disk Could Not Keep Up With Digital Audio Rate" error message

- Digital audio starts and stops

Solutions:

These types of problems are most often caused by a hard disk that is either fragmented or has an access time unsuitable for the required dat rate. Less commonly, they can be caused by other applications "stealir processor time, or by the hard disk's inability to keep up with the data rate due to insufficient buffering.

1. The first and most obvious solution is to close any Windows applications that could possibly be "stealing" processor time and other system resources needed by WinDAT.

2. If you suspect your hard disk is fragmented, it is recommended t you use one of the many commercially available disk optimizing programs.

3. If hard disk has an extremely long access time, or if it tends to become fragmented quite often, you can notify WinDAT to pre-allocate or pre-write to a section of your hard drive before you record.

To do this, add the following entry to the **[VMP]** section of your **WIN.INI** file:

vmp=xx

(Where **xx** is the maximum size of the file in Kilobytes)

If your hard disk tends to become fragmented quite often, create a separate partition of about 20 MB, exclusively for digital audio. Refer to your DOS manual for information on how to partition your hard drive. Assign this new partition as the **Temp Directory** from WinDAT's **Setup** window.

If none of the above solutions solves the problem, you may need to increase the size of the bmem digital audio buffer.

To do this, you must edit the bmem=entry in the **[VMP]** section of your **WIN.INI** file. Normally, this reads **bmem=44**. Try increasing this to **bmem=128**.

After increasing the size of the bmem buffer, re-start Windows and try again to record or play back.

Chapter 3 - Jukebox for Windows

Jukebox for Windows lets you assemble "sound events" into a playlist, then play them in the order you have arranged. The playlist can include WAV and MIDI files, as well as CD tracks.

Jukebox features include:

Extensive capabilities for creating and editing playlists with standard Windows commands like Cut, Copy and Paste.

The Jukebox's Sound Event Manager gives you a convenient way to search for and audition MIDI and WAV files, and to audition CD tracks.

Uses the Windows Media Control Interface (MCI) for true device-independence.

Compatible with the Voyetra CD Player and Microsoft's Musicbox.

Jukebox and Jukebox for Windows are used interchangeably through this chapter.

The Jukebox application consists of two main windows: the **Playlist** and **So Event Manager** windows.

The **Jukebox Playlist** window is the main window you first see when you e Jukebox (**Figure 3.1**). This is also the window that you use most frequently. is divided into the following sections:
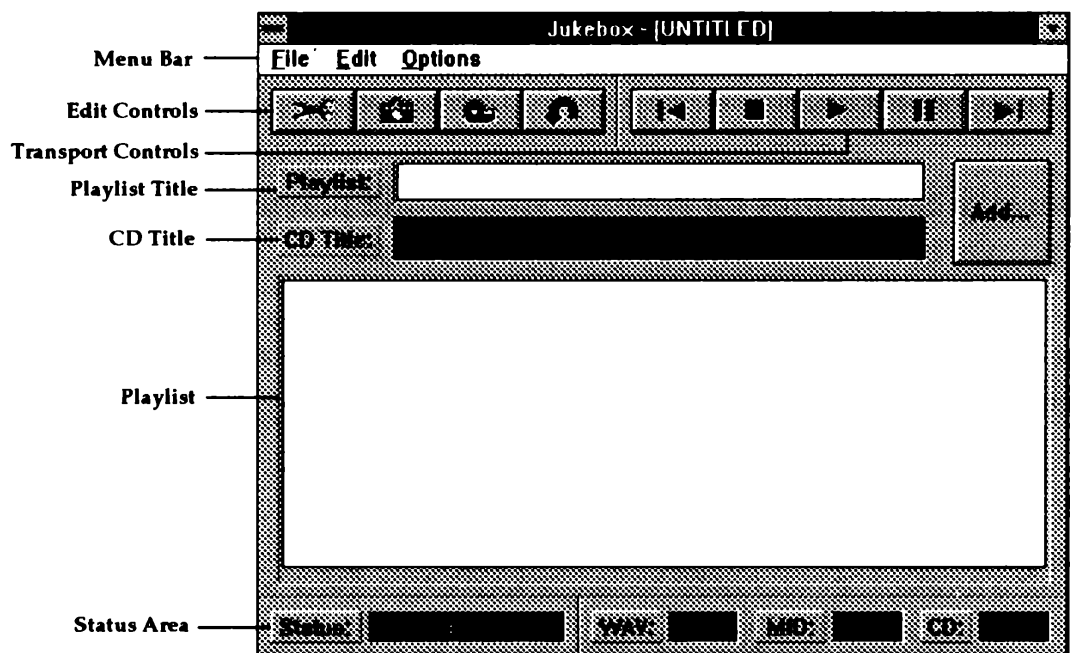

Figure 3.1 The Jukebox's Playlist Window

- **Menu Bar** - Contains pull-down menus common to most Windows applications (File, Edit, and Options).

- **Edit Controls** - Provide quick access to the four most frequently-used] commands: Cut, Copy, Paste, and Undo.

- **Transport Controls** - Tape deck-styled buttons (Play, Stop, Pause, Previous Event and Next Event) control playback of the playlist.

- **Playlist Title Box** - Displays the title of the current playlist.

(I) I title Box - Displays the title of the CD used in the current playlist.

I he Playlist - Displays a list of sound events in the playlist.

Status Area - Displays the current status of the playlist (Playing CD, Playing WAV, Stopped, Paused, etc.). Also displays the how many events are in the playlist, by type.

The Jukebox Sound Event Manager window is used to locate, audition and add sound events to your playlist (**Figure 3.2**). To bring up this window,

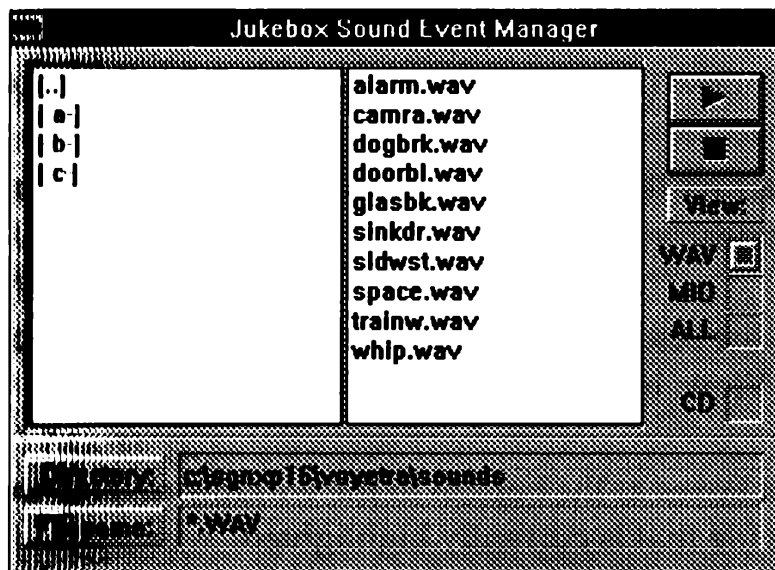click on the Add... button, [   ] in the Jukebox Playlist window.

Figure 3.2 The Jukebox Sound Event Manager Window

The Sound Event Manager window contains four **View:** buttons that let you choose the type of sound events that is displayed:

CD	Displays all the tracks available on the CD currently loaded in your CD-ROM drive.
WAV	Displays all files in the current directory with a ".WAV" extension.
MID	Displays all files in the current directory with a ".MID" extension.
ALL	Displays all files in the current directory, regardless of the extension.

Table 3.1 Sound Event Manager View Options

The WAV, MID and ALL Buttons

If you click on the **View: WAV, MID,** or **ALL** button, the Sound Event Manager window (**Figure 3.2** above) displays two list boxes:

- A **Directory** list box on the left displays the available drives and directories.

- A **File** list box on the right displays files of the type chosen with o of the **View:** buttons (WAV, MID, etc.).

The two text boxes at the bottom of the window display the path and tl name of the file that is currently highlighted.

IIn CD Button

II y⋯ ⋯lick on the **View: CD** button, the Sound Event Manager window ⋯ a single list box that displays the tracks of the current CD.
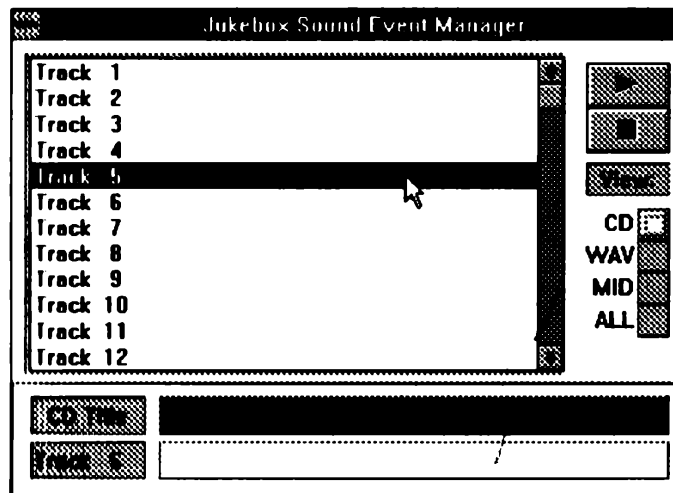

Figure 3.3 Sound Event Manager for CD

⋯ ⋯ of the window, two text boxes display the disk title and the name ⋯ track that is currently highlighted. You can use these to manually enter a title and track names.

3.1   Verifying Window's MCI Configuration

The Jukebox uses a feature of Windows called the **Media Control Interface** (**MCI**) that allows it to work with any Windows-compatible sound hardwar

The Jukebox supports three types of sound events: WAV files, MIDI files, ai CD tracks.

For the Jukebox to function, the necessary MCI drivers must be installed ar properly configured for your system. The MCI drivers should have been automatically installed and configured when you installed Windows on yor system. However, it is possible that you have modified or deleted the MCI driver setup since installing Windows.

3.1.1   Verifying that MCI Drivers are Installed

1.   From the Windows **Control Panel** Group window, double click 1

      Drivers icon, Drivers .

2.   Among the list of installed drivers, there should be the two following entries:

      [MCI] MIDI Sequencer
      [MCI] Sound

      If you have a CD-ROM drive, the list of installed drivers should ¡ contain the entry:

      [MCI] CD Audio

\   If one or more of these entries is missing, refer to the Microsoft
Windows User's Guide to find out how to add it to your list of
installed drivers.

Once you have verified that the necessary drivers are installed, it is a good
idea to test your system's MCI configuration for sound before running the
Jukebox application. The easiest way to do this is with the Windows
Media Player accessory.

3.1.2   Testing Your MCI Sound Configuration

**Media
Player**

\   Run the Media Player application,   , and verify that you are
able to play a WAV file, a MIDI file and a CD track with its **Sound,
MIDI Sequencer** and **CD Audio** devices, respectively.

If you are not sure how to use the Media Player application, refer to
the Windows User's Guide
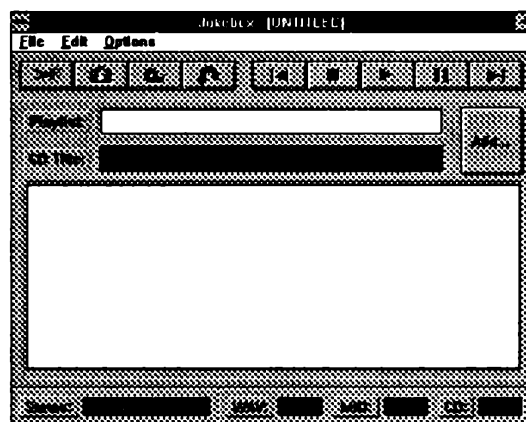
3.2   Jukebox Tutorial

This tutorial is designed to familiarize you quickly with Jukebox's basic functions. If this is the first time you are running Jukebox, you should complete this tutorial to understand Jukebox better.

3.2.1   Starting Jukebox, Loading and Playing a Sample Playli:

To start Jukebox,

JukeBox
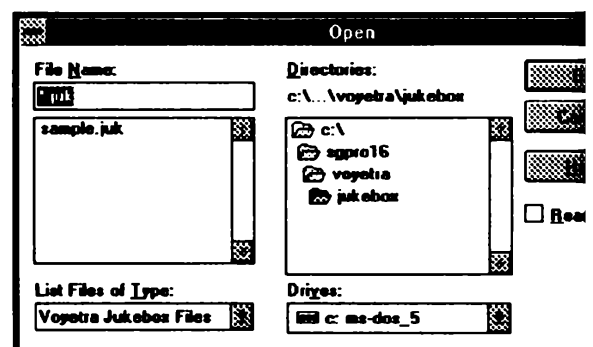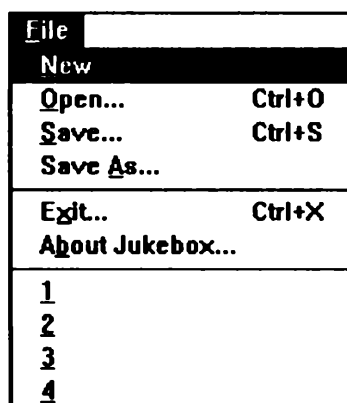
... to disp
Jukebox's
Playlist
window.

Double-click on the
Jukebox icon in the
Sound Galaxy Group
window...

To load the sample playlist (*SAMPLE.JUK*),

Select **Open** from the **File**
menu...

...to display the **Open** dialog box.

At the Open dialog box,

I Select the sample playlist file, *SAMPLE.JUK*, located under the
 \SGPRO16\VOYETRA\JUKEBOX directory.

(♪)   *This assumes you have installed the Sound Galaxy software on drive C:*
 under the default SGPRO16 directory. If not, type in the appropriate
 drive and directory.

The sample playlist is displayed. The **Status Area** at the bottom of the
 below shows the status of Jukebox, as well as the number of WAV,
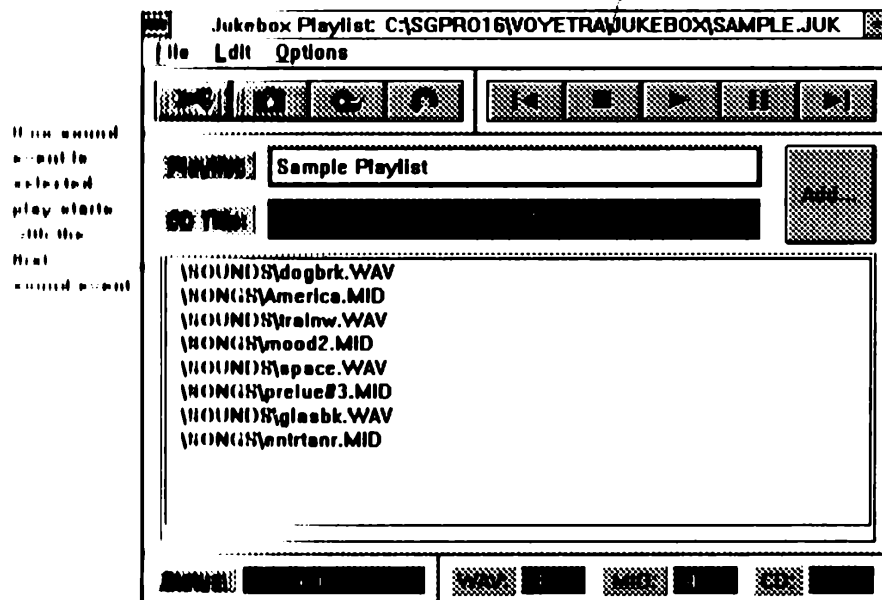 MIDI, and CD files (see **Figure 3.4**).

Figure 3.4 The Jukebox Sample Playlist

Playing the Sample Playlist.

Playlists are the key to the Jukebox program. You can create as many playlists as you wish, and save each one as a file, with a ".JUK" extens

When you open a Jukebox file and click on the **Play** button, the playlis finds and plays each audio file (WAV and MIDI) or CD track in turn (files must be on your hard drive in the paths called for, and you must have the correct disk in your CD-ROM drive.).

You will learn how to create your own playlists later, but to get you started, you will first play the sample playlist, *SAMPLE.JUK*.

To play the sample playlist

1.   Click on the **Play** button, ▓▓▓ , to start the playlist from the beginning. If no event or the first event in the playlist is currentl; highlighted, playback starts at the beginning of the list.

2.   Click on the **Stop** button, ▓■▓ , to halt playback.

3.   To start playing at a specific event in the playlist, highlight the desired event by clicking at it, and then click on the **Play** button.

     For example, if you highlight the third event and click on the **Pla** button, Jukebox starts playing the third event and continue playii to the end of the list.

4.   Try using the **Previous Event** and **Next Event** buttons, ▓◄▓ and ▓►▓ , to jump backward or forward through the playlist, even a Jukebox is playing.

5.   Next, click the **Pause** button, ▓❙❙▓ , to momentarily pause playb Click on the **Pause** button again to resume.

•   When you have finished experimenting with the *SAMPLE.JUK* playlist, click on the **Stop** button to halt playback.

Note that you cannot edit the current playlist or load a different one until you stop playback. These menu items is grayed-out while the **Jukebox** is playing

Running Jukebox In the Background

The Jukebox always stops executing the playlist when you quit the program. However, you can minimize the Jukebox application and it will continue to play sound events in the background while you work in some other Windows applications.

To execute the playlist in the background:

1   With *SAMPLE.JUK* still loaded, click the **Play** button.

When the playlist starts, minimize the Jukebox window by clicking on the **Minimize** button, ▓ , at the top-right of the playlist window.

You can now switch to any other Windows application while the playlist continues to play until it reaches the end. You can also halt playback by returning to the Jukebox and clicking the **Stop** button

The Loop Option

Use the **Loop** option when you want to play a song or group of songs repeatedly When **Loop** is active, the current playlist replays itself wh reaches the end. This process repeats indefinitely, until you stop it.

To activate this feature,

1.   Choose **Loop** from the **Options** menu.

Options
Auto-Audition
Loop

♪   *By default, the Jukebox program always starts with Loop OFF; you must activate it manually.*

A tick, ✓, indicates that the loop option is activated.

3.3.3 Editing the Sample Playlist

Now that you are familiar with how to control Jukebox playback
procedures you are going to edit the sample playlist.

> The Jukebox *editing procedures (Cut, Copy, Paste, and Undo) should be
> familiar to anyone who has used Windows-based application.*

The Cut and Copy Commands

First you will cut some sound events and paste them to a different
part of the playlist.

To cut a single event from the playlist:

1. Click on the event you wish to cut. The event is highlighted.

    Click on the Cut button, , or choose **Cut** from the **Edit** menu.

    The highlighted event is removed from the playlist.

> Click on Undo, , *as you will need that sound event for the later
> part of this tutorial.*

In all Windows programs, both the Cut and Copy commands place
selected data in the Clipboard. The difference is that Cut removes the
selected data; Copy does not.

You can also select (or copy) a group of consecutive or non-consecutive
events by clicking and dragging the mouse.

To cut (or copy) a series of consecutive events:

1. Highlight the first event by clicking the mouse button, and drag the mouse down to select the rest of the consecutive events (**Figure 3.5**).
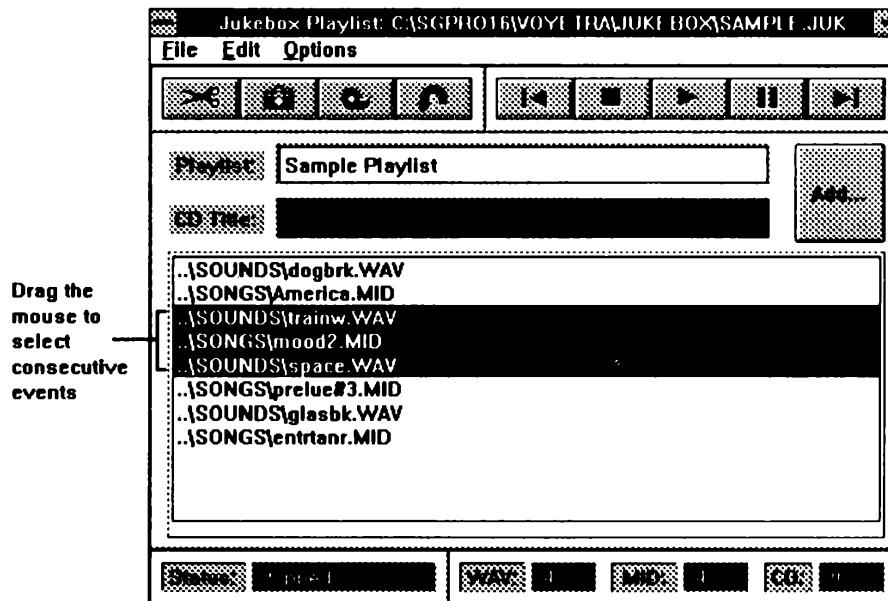
Figure 3.5 Cut/Copy A Series Of Consecutive Events

2. Click on the **Cut** button, ⌗ . (If you want to replicate the sound event, use copy, ⌗ , instead)

♪ *Click at **Undo**, ⌗ , as you will need that sound event for the later part of this tutorial.*

To cut (or copy) a group of non-consecutive events:

1. Holding down the **[Ctrl]** key, click on each of the events that you wish to cut (or copy) **(Figure 3.6)**.
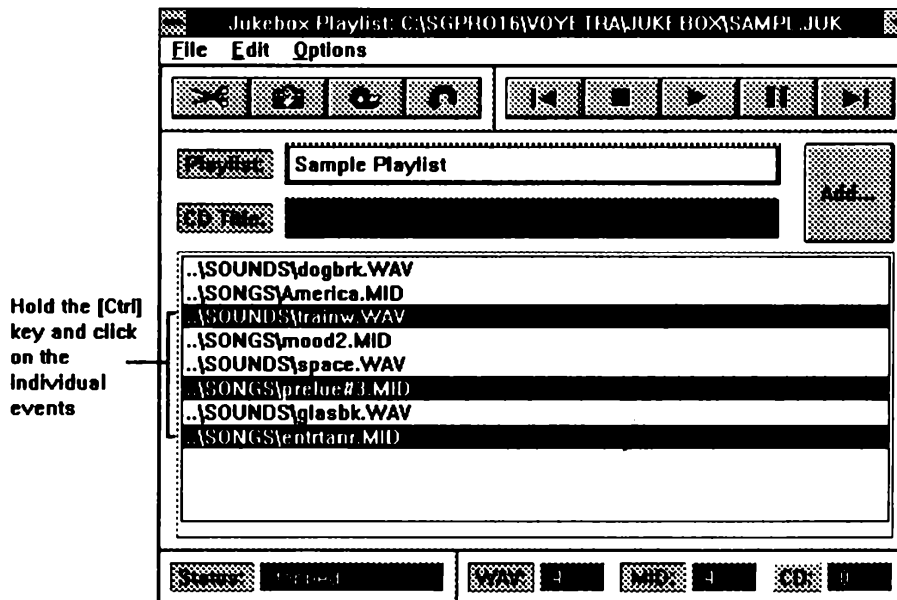
Figure 3.6 Cut/Copy A Series Of Non-Consecutive Events

To de-select any event click on it again while the **[Ctrl]** key is still held down.

2. Click on the **Cut** button, ▨ .

The Paste Command

As with a word processor, you highlight a specific line of text to determine where the data is to be pasted. The Jukebox program uses the following rules for determining where to insert event(s):

- If no event in the playlist is currently highlighted, any pasted events is added to the end of the playlist.

- If one or more events in the playlist are currently highlighted, any pasted events is inserted before the first highlighted event.

- If you want to paste events to the end of the playlist while any events are currently highlighted, you must de-select the highlighted events first. To do this, click on the **Edit** menu and select **Deselect All** before pasting.

Now you are going to paste the events that you last cut to a different part of the same playlist.

To paste to the end of the playlist:

1. If any events in the playlist are highlighted, choose **Deselect All** from the **Edit** menu.

Edit	
Undo	Alt+Bksp
Cut	Shift+Del
Copy	Ctrl+Ins
Paste	Shift+Ins
Delete All '.WAV'	
Delete All '.MID'	
Delete All ' CD'	
Deselect All	Ctrl+D

2. Click on the **Paste** button, ▓▓▓ , or choose **Paste** from the **Edit** menu.

The events are added to the end of the playlist (**Figure 3.7**).
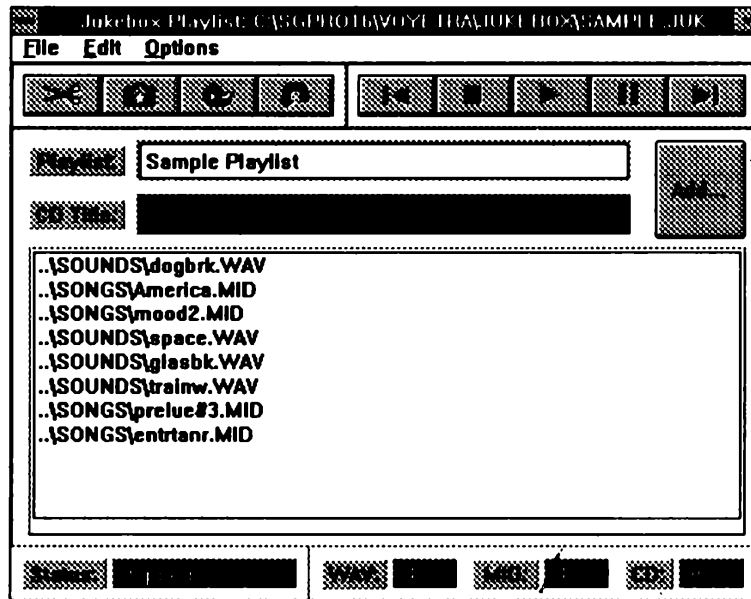
Figure 3.7 Pasting to the End of the Playlist

To paste within the playlist:

1. Highlight the line just below the point where you wish to paste the event (**Figure 3.8**).
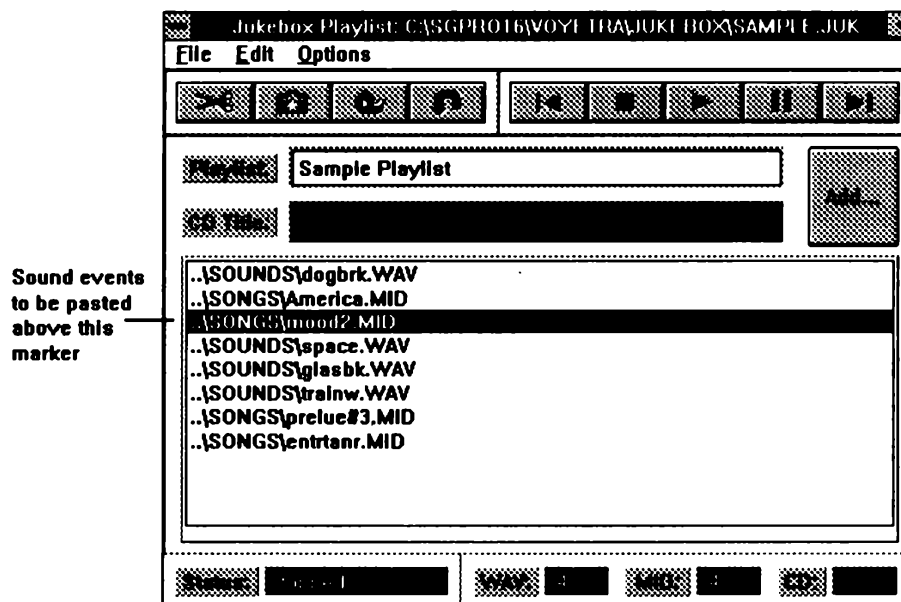
Figure 3.8 Pasting Events - Within The Playlist

2.   Click on the **Paste** button, ▨▨▨ , or choose **Paste** from the **Edit** menu.

The event is inserted above the highlighted line and any subsequent events is shifted down to accommodate it (**Figure 3.9**).
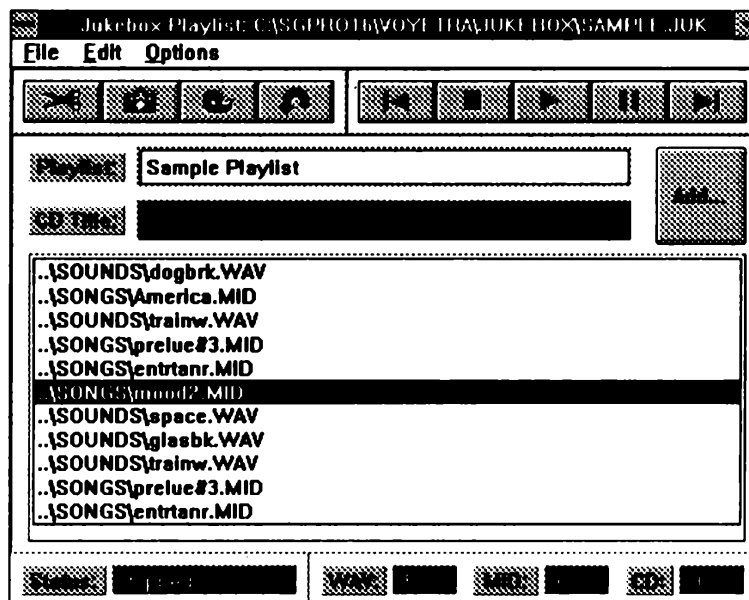
Figure 3.9 The Result of the Paste Command

The Delete Commands

You can **delete all** the sound events of a specified type from your playlist. To do so,

1.   Select the appropriate **Delete All ...** option from the **Edit** pull-down menu to delete all events of a specified type from your playlist.

Edit	
<u>U</u>ndo	Alt+Bksp
Cu<u>t</u>	Shift+Del
<u>C</u>opy	Ctrl+Ins
<u>P</u>aste	Shift+Ins
Delete All ' WAV'	
Delete All '.<u>M</u>ID'	
Delete All ' <u>C</u>D'	
<u>D</u>eselect All	Ctrl+D

3.2.3 Creating a Playlist

You now know how to delete and move events within an existing playlist. Now you will learn how to build a playlist from scratch. You will be using the Sound Event Manager for this task.

You will now create a new playlist from scratch. The final playlist should look similar to that in **Figure 3.10** below.
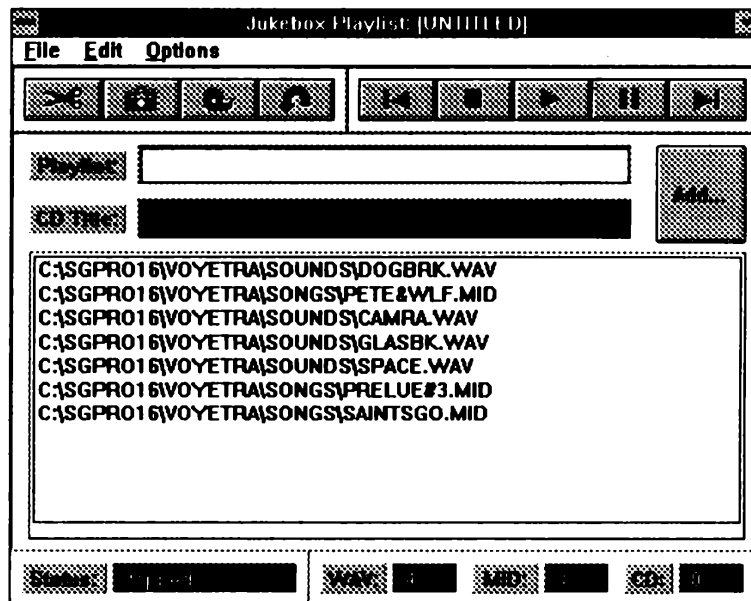
Figure 3.10 The Final Playlist

1. At the Jukebox playlist window, select **New** from the **File** pull-down menu to open a new playlist file.

2. Click the **Add...** button, , to access the **Jukebox Sound Event Manager** window.

Adding a file to the playlist

First, you will add the file *DOGBRK.WAV* to the playlist,

3.   Select **WAV** from the **View:** option.

4.   Use the **Directory** list box to get to the
     C:\SGPRO16\VOYETRA\SOUNDS directory.
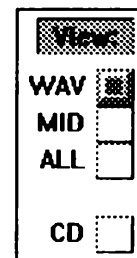
(♪)   *This assumes you have installed the Sound Galaxy software on drive C:
      under the default SGPRO16 directory. If not, type in the appropriate
      drive and directory.*

You should see a list of **WAV** files. To audition a file, select it and
click the Sound Event Manager's **Play** button.

(♪)   *When **Auto Audition** is active, you can audition sound events by
      clicking at them in the Sound Event Manager; you do not need to click
      on the **Play** button. However, Jukebox starts up with **Auto Audition**
      OFF; you must activate it manually.*

5.   From the Sound Event Manager, double-click on *DOGBRK.WAV* to
     add to the playlist.

     That event is now displayed as the only event in the playlist (**Figure
     3.11**).
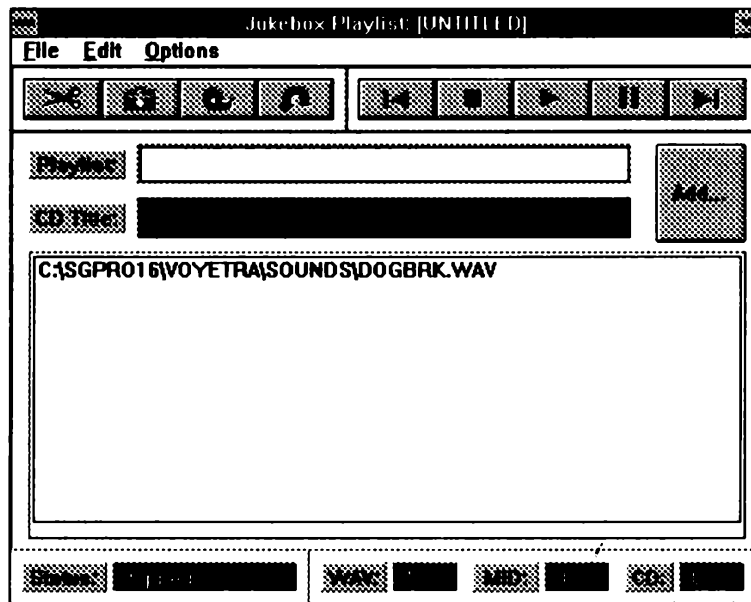
Figure 3.11 Adding an Event to a New Playlist

To close the Sound Event Manager window, press [Alt]+[F4] together, or you can simply bring the Playlist window to the foreground by clicking at any visible part of the Playlist window.

Now you will add a group of new events to your playlist. You do this with the Copy and Paste commands. As with the Playlist window, the Sound Event Manager lets you select a group of consecutive or non-consecutive events.

When copying events from the Sound Event Manager however, you can only use Copy; you cannot use Cut.

Copying Consecutive Events from the Sound Event Manager

To copy the consecutive events *PETE&WLD.MID*, *PRELUE#3.MID*, and *SAINTSGO.MID* from the Sound Event Manager:

1. From the Sound Event Manager, move to the *SONGS* subdirectory, and change the **View:** option to **MID**.

    A list of **MIDI** files are displayed.

2. Click and drag the mouse to highlight the desired events (**Figure 3.12**).
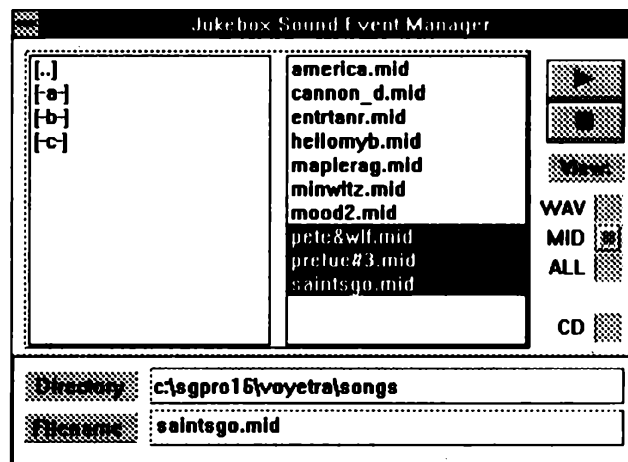
Figure 3.12 Copying Consecutive Events

3. Click on the **Copy** button, [image], in the **Playlist** window.

Pasting to the End of the Playlist

To paste to the *end* of the playlist:

1.   If any events in the playlist are highlighted, de-select them by choosing **Deselect All** from the **Edit** menu.

2.   Click on the **Paste** button, ▓▓▓ , or choose **Paste** from the **Edit** menu.

      The events is inserted at the end of the playlist.

Copying Non-consecutive Events from the Sound Event Manager

To copy the group of non-consecutive events *CAMRA.WAV*, *GLASBK.WAV*, and *SPACE.WAV* from the Sound Event Manager:

1.   From the Sound Event Manager, move back to the *SOUNDS* subdirectory, and change the **View:** option to **WAV**.

2.   Hold down the [Ctrl] key and click on each of the events you wish to copy (**Figure 3.13**).
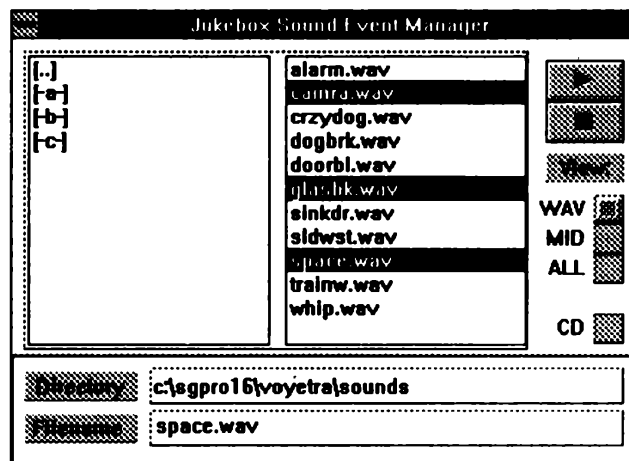
Figure 3.13 Selecting Non-consecutive events

To de-select any event, click on it again while holding down the [Ctrl] key.

2. Click on the **Copy** button, ▓▓▓ , in the **Playlist** window.

Pasting within the Playlist

To paste the group just copied *within* the playlist:

1. Move to the Playlist window by clicking at any visible part of the Playlist window.

2. Highlight the sound event, *PRELUE#3.MID,* in the playlist to insert the new events.

3. Click the **Paste** button or choose **Paste** from the **Edit** menu.

    The group of events is inserted above the highlighted line, and the subsequent events is shifted downward to accommodate them (**Figure 3.14**).
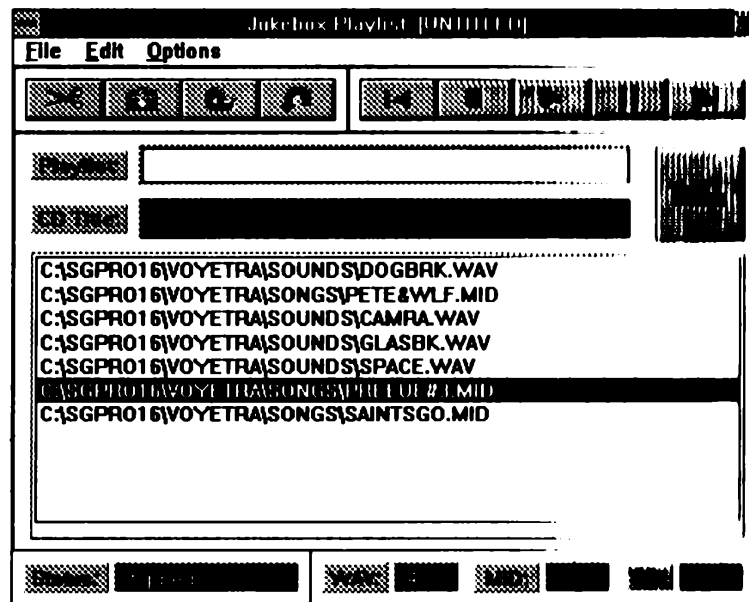
Figure 3.14 Pasting within the Playlist

Once you are satisfied with your new playlist, you can save it as a playlist file. The **Jukebox** saves playlist files with a ".JUK" extension.

Saving the playlist

To save the new playlist:

1. Before saving the playlist, you can give it a title by entering the desired name in the **Playlist Title** box.

2. Choose **Save** from the **File** menu.

    If you are saving a new file, the **Save As** dialog box appears, and you are prompted to type in a file name.

3.2.4 Working with CD Tracks

The steps for adding CD tracks is similar to those for adding WAV and MIDI sound events described above. However, there are some points that you need to take note of when working with CD tracks.

- You should enter a name in the CD Title box so that you can distinguish it from other CDs.

- You should change the generic CD track names to the actual title for each track. This is so that you can remember the contents of the playlist better.

    You have to enter the CD track names in the Sound Event Manager window *before* placing them in the playlist. This is because you cannot edit the track names in the playlist.

The following is the steps to change the generic CD track names to the actual title for each track,

1. Load the CD into your CD-ROM drive.

2. Click on the **Add...** button to display the **Sound Event Manager**.

3. Select the CD option.

    The Sound Event Manager for CD is displayed (**Figure 3.15**).
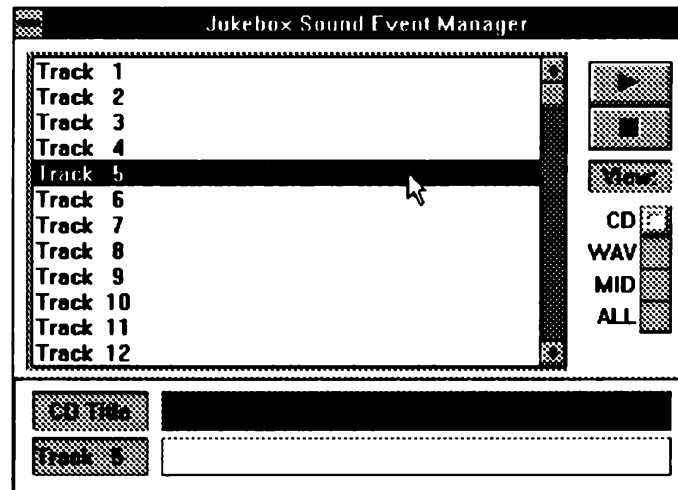
Figure 3.15 The Sound Event Manager for CD

4.   You can enter the CD Title in the CD Title Box.

5.   Click at the first track to select it. Then enter the actual track name in the Track Title box at the bottom of the window.

The track name is listed in the Sound Event Manager display screen.

You are now ready to add the CD tracks to your playlist. This is similar to adding the other types of sound events described above. You may try it out on your own.

Using Jukebox with Other CD-ROM Software

The Jukebox application is compatible with the Voyetra CD Player and Microsoft's Musicbox, and automatically reads disk titles and track lists created by either of these programs.

Working with MUSICBOX.INI Track Lists

When you save track list with the Voyetra CD Player or Microsoft Musicbox, the disk's title and its track names are saved in a file called *MUSICBOX.INI*. Whenever Jukebox scans a disk, it checks to see if a *MUSICBOX.INI* track list exists for that CD. If a *MUSICBOX.INI* track list for that CD is found, the disk title and track names it contains is automatically displayed by the Sound Event Manager.

Chapter 4 - Monologue for Windows

Monologue for Windows is a program that adds the element of speech to most of your Windows applications, e.g., Microsoft Word for Windows, Lotus Ami Pro, Microsoft Excel, etc. In fact, Monologue for Windows allows any Windows application that can internally express its data in text to speak that data.

With Monologue for Windows, you have an easy to use program that runs as a background application (much like a screen saver), and can work with your most memory intensive Windows application.

You also have the ability to use Monologue for Windows' advance programming features to customize your favorite Windows applications for speech.

The main idea behind Monologue for Windows is that you identify the data to be spoken, and make this data available to Monologue for Windows. Then you command Monologue for Windows to read the data.

Monologue for Windows also has a **Dictionary Manager** to help it pronounce those words which do not sound the way they are spelled. The Dictionary Manager corrects the pronunciation by giving those words a phonetic string.

For the rest of this chapter, Monologue and Monologue for Windows will be used interchangeably.

This chapter assumes you have installed Monologue on drive C: under the SGPRO16 directory. If not, use the appropriate drive and directory.

4.1 A Monologue for Windows Tutorial

This tutorial is designed to familiarize you quickly with Monologue's basic functions. If this is the first time you are running Monologue, you should complete this tutorial to understand Monologue better.

4.1.1 Starting Monologue

To start Monologue,

Double-click on the
Monologue icon in the
Sound Galaxy Group
window...
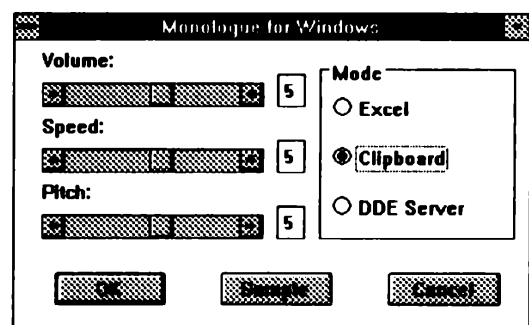
...to display Monologue's main
window.

From the main window, you can adjust the **volume**, **speed** and **pitch** of the voice by moving the corresponding slider left or right, i.e.,

Point the mouse cursor at the relevant slider, click and drag the slider left or right to decrease or increase the level respectively.

Click the **left** mouse button at the **Sample** button to hear the change.

Click the **OK** button to make this setting the default setting
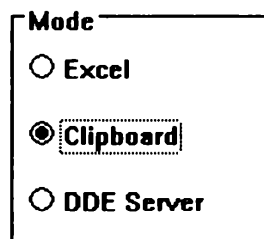
♪ *Click the Cancel button,* ███████ *, instead of OK to go back to the original setting.*

You can run **Monologue** in **three** different modes:

Clipboard In Clipboard mode, all text data to be spoken is taken from the **Windows Clipboard**. Therefore, you need to copy your data to the Clipboard in the usual manner. Then, when Monologue is activated, it will get the data in the Windows Clipboard, and read them out.

Excel In Excel mode, you get all the data from a running copy of **Microsoft Excel**. This is useful for those who primarily run Microsoft Excel only. In this mode, you also **do not** have to copy your data to the Windows Clipboard. What you do is to select the corresponding cell(s) of data to be spoken. Then, when Monologue is activated, it will get the data from these cells, and read them out.

DDE Server In DDE Server mode, all data will be extracted from the DDE message stream. This is an advanced capability which allows various macro languages to initiate a DDE conversation with Monologue. Once a conversation is initiated, Monologue will speak any data sent to it by the other application.

To Select the Mode for Monologue

┌─ **Mode** ─────────┐
│ ○ Excel   │
│   │
│ ⦿ ⌗Clipboard⌗   │
│   │
│ ○ DDE Server   │
└───────────────────┘

➡

[**OK**]

Click the **OK** button to set this as the default mode during startup.

Click the mouse cursor at the corresponding radio button in the **Mode Selector** box.

Now you will use Monologue in each of the three different modes.

4.1.2   To use Monologue in Clipboard Mode

You will now use Monologue with a word processing software (e.g., Microsoft Word for Windows, Lotus Ami Pro, etc.).

1. Make sure that Monologue is in **Clipboard** mode and click **OK**.

2. Minimize Monologue by clicking at the **Reduce to Icon** button, ▓ , at the top right corner of the window.

3. Open your word processing software by double-clicking at its icon.

4. Type in the following message to be spoken:

    ```
    Hello!  This is your friendly word processing
    program speaking.  How may I be of service to you?
    ```

5. Then copy this message to the Windows Clipboard in the usual manner (in most cases, you select the text, and choose **Copy** from the **Edit** pull-down menu).

6. Minimize your word processing program by clicking at the **Reduce to Icon** button, ▓ , at the top right corner of the window.

7. Move the mouse cursor to the Monologue icon, and click the **right** mouse button at the icon.

    The above message will be spoken through your sound card.

♪ *Some applications will only work when it is maximized, i.e., they use the full screen by default. In this case, you will need to resize the application's window so that the Monologue icon is accessible.*

To stop Monologue speaking midway,

If you need to interrupt Monologue after it has started speaking,

1. Move the mouse cursor to the Monologue icon, and click the **left** mouse button at the icon.

   The above message will stop speaking at the end of the current sentence.

4.1.3 To use Monologue in Excel mode

Using Monologue in Excel mode is similar to Clipboard mode, except that you do not need to copy the data into the Windows Clipboard.

To get into Excel mode,

1.   At Monologue's main window, select **Excel** mode, and click the **OK** button.

To use Monologue in Excel mode,

3.   Minimize Monologue by clicking at the **Reduce to Icon** button, ▨ , at the top right corner of the window.

4.   Open your Microsoft Excel software, and enter the data to be spoken in their respective cell(s).

♪   *To use Monologue in Excel mode more efficiently, resize the Excel window so that the Monologue icon can be seen.*

5.   Select the cell(s) that contain the data to be spoken.

6.   Move the mouse cursor to the Monologue icon, and click the **right** mouse button at the icon.

    The above message will be spoken through your sound card.

4.1.4 To use Monologue in DDE Server mode

You can use Monologue for Windows to customize your Windows applications so that these Windows application has the added feature of speech in them. This is an advance feature in Monologue, and you need at least a basic knowledge of programming in Windows to be able to effectively use this feature.

With Monologue for Windows, you can use the DDE programming interface to enable you to interact Monologue with other Windows applications. The only requirement is that the application provide a mechanism for DDE messaging.

Monologue implements a DDE Server interface which allows other applications to initiate a DDE conversation and send data to Monologue for speaking. It is important to note that DDE is an arrangement where two applications cooperate in a message passing protocol. The DDE Server is actually acting as an agent for the DDE Client application.

Figure 4.1 demonstrates a typical conversation between a DDE Client application and the Monologue DDE Server.

```
┌──────────────────────────────────────────────────────┐
│  ┌─────────────┐                      ┌─────────────┐  │
│  │ DDE Client  │                      │ DDE Server  │  │
│  └─────────────┘                      └─────────────┘  │
│                                                        │
│  DDE Initiate            ···········>                  │
│  (Client seek conversation)                            │
│                          <···········  DDE Acknowledge │
│                                         (Conversation starts) │
│                                                        │
│  DDE Poke                ···········>                  │
│  (Data is sent to server)                              │
│                                         (Speech begins)│
│                          <···········  DDE Acknowledge │
│                                                        │
│  DDE Terminate           ···········>                  │
│                          <···········  DDE Acknowledge │
│                                         (Conversation is ended) │
└──────────────────────────────────────────────────────┘
```
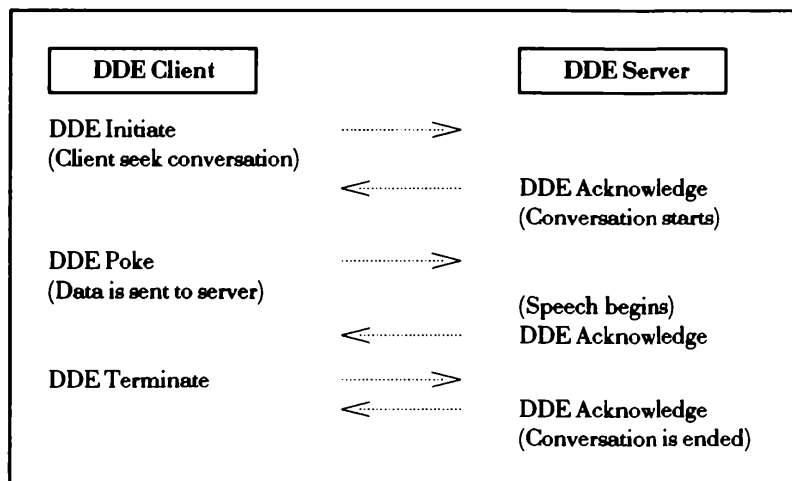
Figure 4.1 DDE Interfacing Between Application and Monologue

For the purpose of initiating a conversation, the client (your Window application) must supply two key pieces of information; the **Application Name** and the **Topic**. These two pieces of information are used to initiate a request for the DDE Server (Monologue) to interface with the client. Monologue uses the Application Name *MONOLOGUE* and the Topic *TALK*.

Once the conversation has been started, Monologue will speak any data it received in subsequent **DDE Poke** messages. When the client is done, it should send a **DDE Terminate** message to signal the end of the conversation.

For the DDE interface to work, you must startup Monologue for Windows before executing the conversation.

Below are two examples to show:

eg#1   how you can create a macro in Microsoft Word for Windows 2.0 to say a message when the macro is called, and

eg#2   how you can create an functionally identical macro in Microsoft Excel 3.0.

Refer to the Microsoft Word for Windows and Microsoft Excel manuals on creating and running a macro if you have any problems.

eg#1

```
sub MAIN
'Macro demonstrating the Monologue DDE Interface
'Initiate DDE Interface
child = DDEInitiate ("MONOLOG", "TALK")

'Error checking routine
if child=0 then
 Msgbox "Cannot initiate DDE Conversation"
 goto QUIT
end if

'Sending data to be spoken
'Note the space in the Item field.
DDEPoke (child, " ", "This is your friendly word processor
calling via DDE link")

'End of data transfer
DDETerminate(child)

QUIT:
end sub
```

eg#2

	A	B
1		Excel calling Monologue via DDE link.
2		
3	SendChnl	SpeakData
4		=INITIATE("MONOLOG","TALK")
5		=POKE(SendChnl," ",B1)
6		=TERMINATE(SendChnl)
7		=RETURN()

While the internal function names will be different for different application's macro language, these example above demonstrates the basic characteristics of a macro which utilizes the Monologue for Windows DDE Server.

After creating the macros, you can execute them to "make the program speak".

4.1.5   To quit Monologue for Windows,
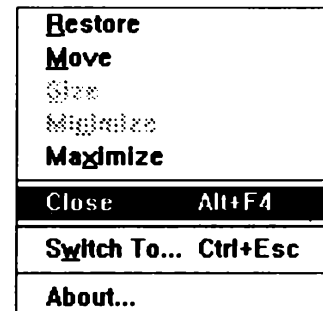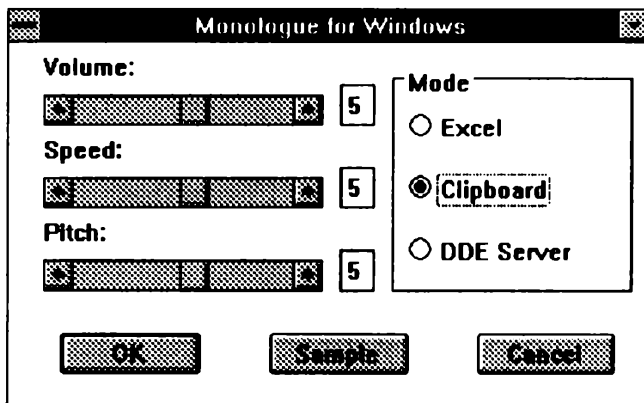
Click at Monologue's **system menu** icon, ▨ , to display the menu options.

Select the **Close** option to éxit Monologue, and return you to the Windows environment.

4.1.6   Using the Dictionary Manager

The **Dictionary Manager** is a powerful interactive tool for managing those words that are spoken differently from the way they are spelled. With this tool, you can add, delete and modify words in the dictionary while interactively trying various combinations of English and Phonetics constructs.

Monologue already comes with a kernel dictionary that contains a list of words which are commonly used in English which Monologue does not pronounce correctly because of its spelling. These words have been given phonetic codes to help Monologue correct its pronunciation.

You can refer to Table 4.1 and Table 4.2 (Page 4 - 19) for a listing of all the phonetic and modifiers used in Monologue.

You will now familiarize yourself with using the Dictionary Manager.

To start the Dictionary Manager,

Dictionary
Manager

Double-click the
Dictionary Manager
icon in the Sound
Galaxy window...

...to display the *Monologue Exception Dictionary* window.

The current loaded dictionary is a copy of the default kernel dictionary.

To find a word from the dictionary

To find a word (e.g., **EXPERIENCE**) in the currently loaded dictionary,

English Word:

| EXPERIENCE |

Type the word, *experience*, in the **English Word:** box...

➡ | Find Entry |

...and then click at the **Find Entry** button to start the search.

➡ **Sounds Like:**

| <<⁻EHksPX'lHrlY-lXns>> |

The phonetic construct for EXPERIENCE is displayed in the **Sounds Like:** box.

🎵 *You can refer to Table 4.1 and 4.2 (Page 4 - 19) for a listing of all the phonetic and modifiers used in Monologue.*

If the word is not in the dictionary, a "This word is not in the dictionary" dialog box is displayed.

You can **hear what the word sounds like** once you found it by following the steps below;

1. Click at the **Say English Word** button, | Say English Word |, to hear how Monologue pronounce the spelling.

2. Click at the **Say Sounds Like** button, | Say Sounds Like | , to hear how Monologue uses its phonetic constructs to correct the pronunciation.

You can also **add** and **delete** words from the list.

To add a word to the dictionary

To add a word (e.g., **COWABANGA**) to the list,

English Word:

| COWABANGA |

Type the word, *cowabanga*, in the **English Word:** box.

➡️ [Say English Word]   Click at the **Say English Word** button to hear how Monologue pronounce the spelling.

➡️ **Sounds Like:** | <<˜k'AWAH'bAHNG/AH>> |

Type the phonetic construct in the **Sounds Like:** box. You have to use the exact upper and lower case of the phonetic constr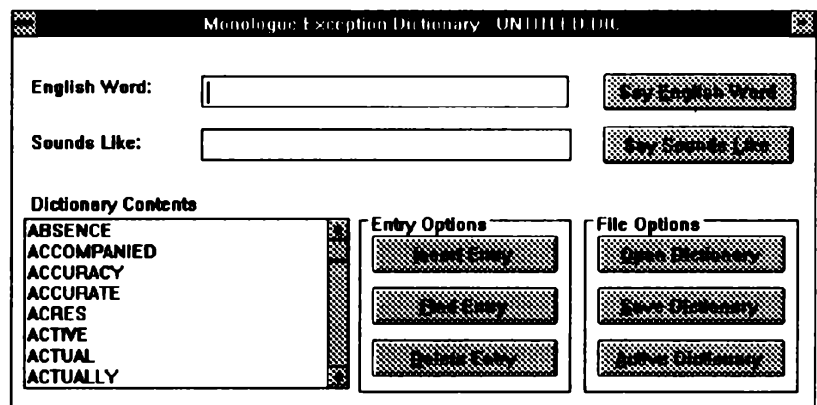uct. Refer to **Table 4.1** and **Table 4.2 (Page 4 - 19)** for a listing of all the phonetic and modifiers used in Monologue.

➡️ [Say Sounds Like]   Click at the **Say Sounds Like** button to hear how Monologue uses its phonetic constructs to correct the pronunciation.

➡️ [Insert Entry]   Once you are satisfied with the pronunciation, click at the **Insert Entry** button to add this word into the list.

To delete a word from the dictionary,

To delete a word (e.g., **COWABANGA**) from the Exception Dictionary,

English Word: | COWABANGA | Type the word, *cowabanga*, in the **English Word** box...

➡️   [**Find Entry**]   ➡️   [**Delete Entry**]
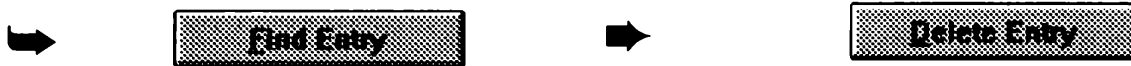
..., then click at the **Find Entry** button to start the search.

When the word is found, click at the **Delete Entry** button to delete this word from the list.

After editing the list in the Exception Dictionary, you must update the list if you want to save your work.

To update the dictionary,

[**Save Dictionary**]

Click at the **Save Dictionary** button...   ➡️
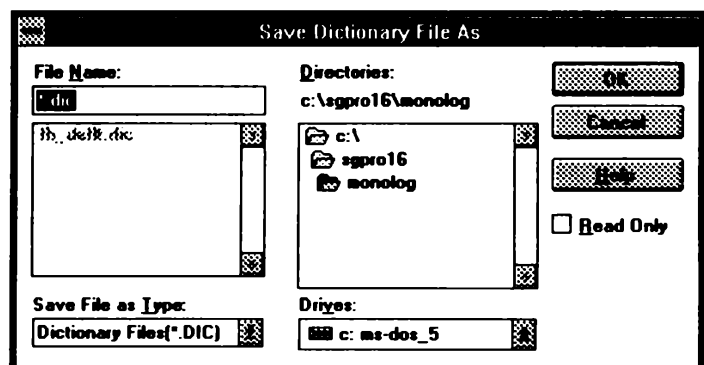
...to display the **Save Dictionary** window.

You can either save this as a new dictionary, or as the default kernel dictionary.

To **save as a new dictionary,**

1.   Type in the name of the new dictionary in the **File Name** box.

2.   Click at the **OK** button to create this dictionary.

You can also load a different dictionary to work on.

To load a different dictionary,

1.   Click at the **Open Dictionary** button, . The **Open Dictionary File** window prompts you for the new dictionary to change to.

2.   Click at the dictionary to change to and click **OK**.

> *Even though you have loaded a different dictionary, Monologue still uses the default kernel dictionary as a reference. If you want to change this reference dictionary, you have to set the active dictionary (see below).*

By default, the kernel dictionary is used as the default dictionary every time you run Monologue. You can change the active dictionary for different documents (for example) being spoken.

To set the active dictionary,

Active Dictionary   Click the **Active Dictionary** button...

➡

```
┌─────────────────────────────────┐
│ ▄  │   Set Active Dictionary    │
├─────────────────────────────────┤
│                                 │
│ The current active dictionary   │
│ file is:                        │
│                                 │
│ "FB_DEFLT.DIC"                  │
│                                 │
│ Do you wish to change this?     │
│                                 │
│        ┌──────┐  ┌──────────┐   │
│        │  OK  │  │  Cancel  │   │
│        └──────┘  └──────────┘   │
└─────────────────────────────────┘
```

...The **Set Active Dictionary** window shows the current dictionary used by **Monologue**, and prompts you to change the current dictionary.
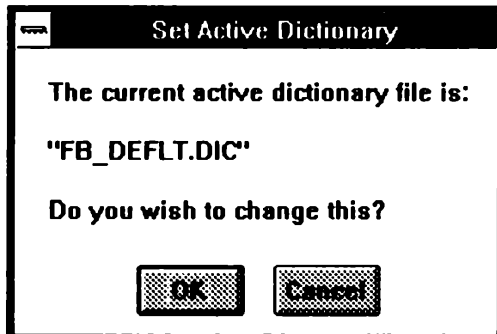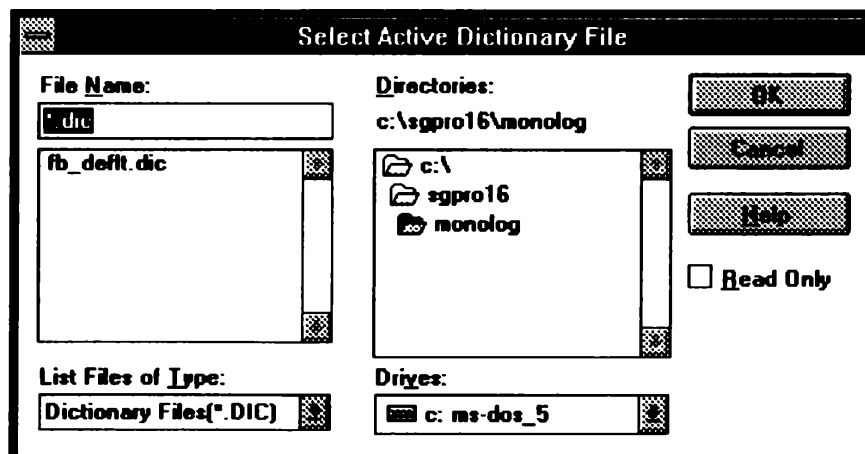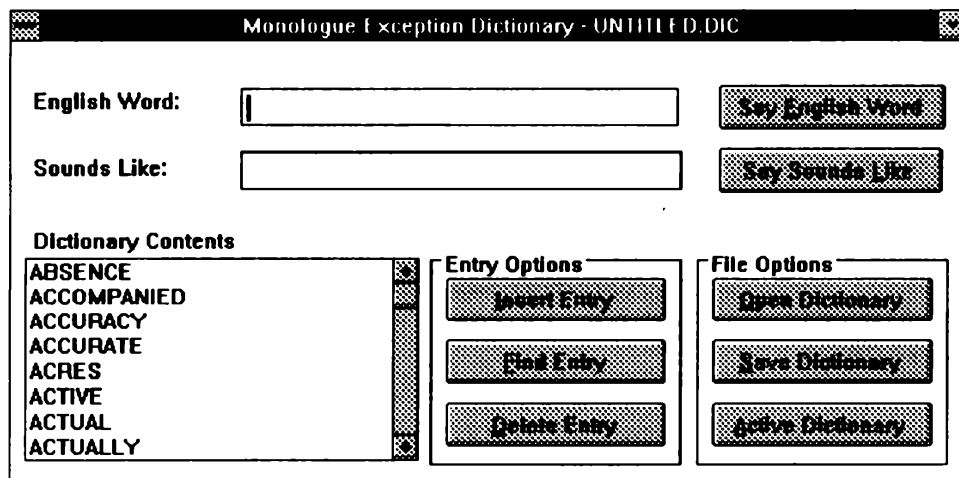
➡   **OK**   Click **OK** to change the current dictionary.

➡

```
┌────────────────────────────────────────────────────────┐
│ ▨  │          Select Active Dictionary File            │
├────────────────────────────────────────────────────────┤
│ File Name:              Directories:                    │
│ ┌──────────────┐        c:\sgpro16\monolog              │
│ │ *.dic        │                             ┌────────┐ │
│ ├──────────────┤        ┌──────────────┐     │   OK   │ │
│ │ fb_deflt.dic │        │ 🗁 c:\        │     └────────┘ │
│ │              │        │ 🗁 sgpro16    │     ┌────────┐ │
│ │              │        │ 🗀 monolog    │     │ Cancel │ │
│ │              │        │              │     └────────┘ │
│ │              │        │              │     ┌────────┐ │
│ │              │        │              │     │  Help  │ │
│ │              │        │              │     └────────┘ │
│ └──────────────┘        └──────────────┘                │
│                                            ☐ Read Only   │
│ List Files of Type:     Drives:                         │
│ ┌──────────────────┐    ┌────────────────┐              │
│ │Dictionary Files  │    │🖴 c: ms-dos_5  │              │
│ │(*.DIC)           │    │                │              │
│ └──────────────────┘    └────────────────┘              │
└────────────────────────────────────────────────────────┘
```
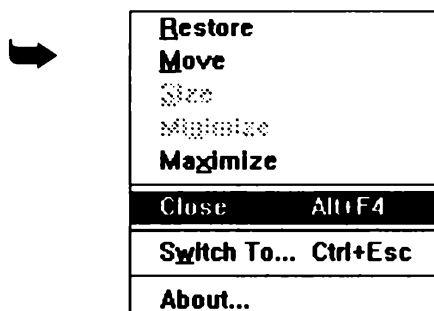
The **Select Action Dictionary File** window is displayed. Click at the dictionary to change to and click **OK**.

When you are done using the Dictionary Manager, you can quit the Dictionary Manger.

To quit the Dictionary Manager,

Click at the **system menu** icon, ▦ , to display the menu options.

Monologue Exception Dictionary - UNTITLED.DIC

English Word:

Sounds Like:

Dictionary Contents

ABSENCE
ACCOMPANIED
ACCURACY
ACCURATE
ACRES
ACTIVE
ACTUAL
ACTUALLY

Entry Options

File Options

Restore	
Move	
Size	
Minimize	
Maximize	
Close	Alt+F4
Switch To...	Ctrl+Esc
About...	

Select the **Close** option to exit the Dictionary Manager.

4.1.7 Phonetic Codes and Modifiers Used in Monologue

Table 4.1 and **Table 4.2** shows the list of phonetic codes and modifiers.

Phonetic	Sample	Phonetic	Sample	Phonetic	Sample
IY	beet	AW	bout	z	zen
IH	bit	LX	fall	ZH	usual
IX	decide	l	low	f	fit
EH	bet	m	mow	TH	thin
AE	bat	n	no	s	sin
AH	but	NG	sing	SH	shin
AX	about	y	yes	h	him
AA	cot	r	red	p	pin
UH	book	w	wed	PX	spin
UW	boot	b	bed	t	top
OW	boat	d	dead	TX	stop
ER	bird	g	get	DX	butter
AY	bite	v	vet	k	kite
EY	bait	DH	then	KX	sky
OY	boy				

Table 4.1 List of Phonetic Codes used in Monologue

Symbol	Meaning
(	Shorten the Phonetic code which follows
)	Lengthen the Phonetic code which follows
/	Increase pitch by 20%
\	Decrease pitch by 20%
'	Increase pitch by 30% and lengthen
`	Increase pitch by 20% and lengthen
-	Decrease pitch by 30% and shorten
nn (two digits)	Target pitch to this level
Sn (one digit)	Set speed to this level
Vn (one digit)	Set volume to this level

Table 4.2 List of Modifiers used in Monologue

Pitch changes are propagated **backwards** so that placing a pitch digit at the end of a phrase defines the ending pitch. The pitch change will be distributed backwards to the last pitch target definition.

4.2   Troubleshooting Monologue for Windows

In the event that you encounter difficulty with Monologue for Windows, please read through this section to help you resolve the problem.

Before going any farther, you can perform the following simple check to make sure your hardware and software are functioning properly together.

Restart Windows and start Monologue for Windows as the only Windows application and press the **Sample** button. If you are able to hear the "**Testing 1-2-3**" message, then it is safe to assume that the installation of Monologue for Windows is correct. If, on the other hand, you do not hear the sample message. or Monologue fail to startup, it is likely that the installation options were chosen incorrectly. You may also want to make sure that your sound card is properly installed.

4.2.1   Common Problems Encountered

Symptom   No speech is audible but the system does not seem to hang or otherwise fail.

Probable   Your audio hardware volume level is inadequate. Adjust
Cause   the volume control on the hardware. If you are using an internal speaker option and your system is equipped with a piezo-electric speaker the volume may not be adequate; you may want to consider the purchase of an audio accessory.

Symptom   Speech is audible but pauses occur at inappropriate intervals.

Probable Cause   The disk on which Monologue for Windows is installed is not able to transfer data rapidly enough to keep up with the audio dial out rate. Monologue for Windows should NOT be installed on either a floppy drive or a network drive. The transfer rates on these devices may not be adequate for the purpose of speech continuity. Reinstall Monologue for Windows to a more appropriate device.

Symptom   An audible click occurs at a regular frequency during speech output.

Probable Cause   Your system's CPU speed is not quite fast enough to permit buffering without a "drop-out". This problem occurs most frequently with slower 386 and 386SX systems running in Enhanced Mode. The best solution is to run the system in Standard Mode where the interrupt latency is considerably shorter.

Symptom   Monologue for Windows seems to cause a problem with a network connection or serial communications in another Windows program.

Probable Cause   This problem is most frequently observed when using the Standard Environment option. If you have Windows 3.0, make sure that it is configured to Multimedia Extensions environment. Also check that you have properly installed the Wave/MIDI Driver that comes with the sound card package.

Symptom   Speech is audible but seems to "stutter" or "hiccup" but seems to improve as speech goes on.

Probable   This problem occurs when any one of a number of
Cause   conditions exists. 1) The speech resources are not present in memory and the storage disk is unable to keep up with the speech output; or 2) Other applications use of memory is forcing an excessive amount of movement of data to-and-from disk; or 3) A marginal memory situation exists. Note that this problem is NOT fatal and will generally fix itself as the speech engine is repeatedly accessed. If you have loaded several large applications you may wish to either close some less frequently used applications or add more memory to your system.

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